

"48 HOURS" DISPUTE—JULY, 1897 TO JANUARY, 1898.



LIST

OF THE

FEDERATED ENGINEERING AND
SHIPBUILDING EMPLOYERS WHO
RESISTED THE DEMAND FOR A
48 HOURS' WORKING WEEK.

HD
5367
E52
1897

WITH SUPPLEMENTARY LIST OF
MEMBERS, No. 1, APPENDED.



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LIST —

OF THE

FEDERATED ENGINEERING AND
SHIPBUILDING EMPLOYERS WHO
RESISTED THE DEMAND FOR A
48 HOURS' WORKING WEEK.

THE ENGINEERING EMPLOYERS' FEDERATION,
105 WEST GEORGE STREET, GLASGOW.

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"48 HOURS" DISPUTE—JULY, 1897 TO JANUARY, 1898.

NOTE. _____

In response to numerous applications (both home and foreign) for a list of the Firms who took an active part in resisting the demand for a reduction of the working hours from 54 to 48 per week—sought to be enforced by a large section of the workmen in the Engineering Industry of the United Kingdom—this List has been compiled by the Committee of the Engineering Employers' Federation.

At the commencement of that long and memorable struggle, 180 Firms were involved; but the vital character of the issues brought daily accessions to the Federation, and on the following pages will be found the names of the 702 Firms who *successfully resisted* the attempt to enforce a

REDUCTION OF THE WORKING HOURS,

and who *vindicated*, but only after a prolonged stoppage of work, the Employers' right to

FREEDOM OF MANAGEMENT.

HEAD OFFICE:

GLASGOW—105 WEST GEORGE STREET,

December, 1898.

"48 HOURS" DISPUTE—JULY, 1897 TO JANUARY, 1898.

The Federated Engineering and Shipbuilding Employers.

EXECUTIVE COMMITTEE

WHO ACTED *IN RE* THE "48 HOURS" DEMAND.

ENGINEERING REPRESENTATIVES.

ENGLAND.

BARROW—

Mr. A. ADAMSON, - - - of Messrs. Vickers, Sons & Maxim, Limited.

BOLTON—

Sir B. A. DOBSON, - - - ,, Dobson & Barlow, Limited.

HULL—

Mr. A. E. SEATON, - - - ,, Earle's Shipbuilding and Engineering Co., Limited.

KEIGHLEY—

Mr. J. W. DARLING, - - - ,, Darling & Sellers, Limited.

LEICESTER—

Mr. GEORGE JESSOP, - - - ,, Jessop & Appleby Bros., Limited.

LIVERPOOL AND BIRKENHEAD—

Mr. JOHN LAIRD, - - - ,, Laird Bros., Birkenhead.

LONDON AND DISTRICT—

Mr. JOHN DONALDSON, - - - ,, John I. Thornycroft & Co.

Mr. ALEX. SIEMENS, - - - ,, Siemens Bros. & Co., Limited.

Mr. T. PERCIVAL WILSON, - - - ,, Easton, Anderson & Goolden, Limited.

Ship Repairers' Representative—

Mr. GEO. FLETCHER, - - - ,, 9 London Street, Fenchurch Street, E.C.

MANCHESTER AND DISTRICT—

Colonel HENRY C. S. DYER, - - - ,, Sir W. G. Armstrong, Whitworth & Co., Limited.

Mr. J. W. HULSE, - - - ,, Hulse & Co., Limited.

Mr. JOHN M'QUEEN, - - - ,, John Hetherington & Sons, Limited.

The following List is divided into two Sections.

SECTION I.—Arranged Alphabetically—pp. 10 to 58.

SECTION II.—Arranged under Trade Headings—pp. 59 to 160.

SECTION I.

ARRANGED IN ALPHABETICAL ORDER.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE.
Atlas Engineering Co., The ...	Engineers and Machine Tool Makers	Chapel St., Levenshulme	Near Manchester	Atla Works, Levenshulme	6295
Ayrton, William, & Co. ...	Engineers and Sewing Thread Machinists, etc.	Gorebrook Ironworks, Longsight	Manchester ...	Spooler, Manchester	
Bailey & Garnett, Ltd. ...	Machinists	Eagle Ironworks...	Stalybridge ...	Bailey & Garnett, Stalybridge	135
Bailey, W. H., & Co., Ltd. ...	Engineers	Albion Works, Salford ...	Manchester ...	Beacon, Salford ...	991
Baldwin, James... ..	Engineer, Brassfounder and Steam Fittings Maker	Devonshire Brass Works, Park Wood Street	Keighley	Baldwin, Engineer, Keighley	
Barclay, Curle & Co., Ltd. ...	Shipbuilders and Marine Engineers, Engine, Boiler and Ship Repairers	Shipyards—Whiteinch ...	Glasgow ...	Barclay, Whiteinch, by Glasgow	3193
		Engine Shop—36 Fannies-ton Street	... ..	... ..	551
		Boilermaking and Ship Repairing Works — 88 Kelvinhaugh Street	... ..	... ..	1269
Barker, John, & Sons, Ltd. ...	Hoist and Crane Makers	Park Street Ironworks ...	Oldham ...	Barkers, Engineers, Oldham	75
Barlow, H. B., & Co. ...	Engineers	Cornbrook Works, Chester Road,	Manchester ...	Works, Manchester	3685
Barns, J. C.	Brassfounder	Union Street, Borough ...	London, S.E.		
Barracrough, Joseph, & Sons	Ironfounders, Engineers and Brass-founders	Union Foundry	Barnsley ...	Pulley, Barnsley ...	48
Barrett, R., & Sons, Ltd. ...	Iron and Brass Founders	King's Head Court, Beech Street	London, E.C.	Gunmetal, London...	9 Ba
Barry, Henry, & Co., Ltd. ...	Engineers for Transmission of Power and Material	West North Street ...	Aberdeen ...	Barry Henry, Aberdeen	333
Beck & Co., Ltd.	Hydraulic Engineers, Brass-founders, etc.	130 Great Suffolk Street...	London, S.E.	Hydrant, London ..	860 H
Beeley, Thomas... ..	Boilermaker and Engineer	Hyde Junction Ironworks	Hyde, ...	Beeley, Hyde	

etc.	Machine Tool Makers	Clyde Engine Works, Polmadie	Glasgow	Bennie, Polmadie, Glasgow	Paddington
James, & Sons	Machine Stoker and Conveying Plant Engineers	Lancashire Stoker Works, Deansgate	Bolton	Bennis, Bolton	1262
Edward, & Co., Ltd.	Engineer	28 Victoria Street	London, S.W.		104
William	Papermakers' Engineers and Ironfounders	Robin Hood Street	Nottingham		
De, & Co., Ltd.	(See <i>De Bergue & Co., Ltd.</i>)	Lodge Bank Works	Bury	Calender, Bury	
Francis, & Sons	Engineers' Tool Makers	Calder Dale Ironworks	Sowerby	Berrys, Sowerby	25
Henry, & Co.	Hydraulic Engineers	Croydon Works	Leeds	Rivetter, Leeds	557
John	Engineer and Ironfounder	Bank Foundry	Halifax	Berry, Halifax	341
James, & Son, Ltd.	Paper Mill and Rubber Mill Engineers	Leith Walk Foundry	Edinburgh	Bertram, Leith	521
Wms. Ltd.	Papermakers' Engineers and Steam Engine Builders	St. Katherine's Works, Sciennes	Edinburgh	Bertram, Edinburgh	645
Peacock & Co., Ltd.	Locomotive Builders and Machine Tool Makers	Gorton Foundry	Manchester	Loco., Gorton	255
Wood, J., & Son	Engineers, Ironfounders and Machinists	Tempest Street	Wolverhampton		
Wright & Newton	Special Metal Manufacturers	Longport	Staffordshire	Bronze, Longport	3004
Brothers	Engineers' Tool Makers	Victoria Iron Works, Water Lane	Halifax	Bees, Halifax	
G., & Co.	Machine Tool Makers and Engineers	Islington Tool Works, Salford	Manchester	Birch, Islington, Salford	3191
J., & Co.	Ironfounders	Portobello Foundry	Sunderland		
William	Ironfounder	Laygate Street	South Shields		51
burn & Crawshaw	Makers of Tools and Machines for Tin, Zinc and Sheet Iron Workers	Paragon Works, Wood Street	Wakefield	Paragon, Wakefield	
burn, George, & Sons, Ltd.	Hosiery Machinists	Atlas Works	Nottingham	Blackboro', Nottingham	134

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Blackburn, Joseph ...	Electrical Engineer and Contractor	Gresham Works ...	Nottingham ...	Blackburn, Nottingham	238
Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons) Ltd.	Iron and Brass Founders, Makers of Looms, Sizing, Winding, Warping, etc., Machinery	Phoenix Iron Works Rose Hill Foundry	Blackburn	Phoenix, Blackburn	11
Blackwood & Gordon ...	Marine Engineers, Shipbuilders, and Boilermakers; Engine, Boiler and Ship Repairers	Castle Building Yard and Slip	Port-Glasgow	Blackwood Gordon, Port-Glasgow	4
Blair & Co., Ltd. ...	Marine Engineers, Boilermakers and Ironfounders	Norton Road ...	Stockton-on-Tees	Blair, Stockton-on-Tees	2 P.O. 12 Nat.
Blake, Barclay & Co. ...	Engineers ...	Victoria Works ...	Greenock ...	Filter, Greenock ...	130
Blundell's London Copper and Brass Works Co., Ltd.	Engineers, Coppersmiths and Brass-founders	23 25 West India Dock Road, Limehouse	London, E. ...	Blundell, London ...	29 Eastern
Bodden, William, & Son ...	Spindle Manufacturers ...	Hargreaves Works	Oldham ...	Bodden, Oldham ...	5
Bolton Engineering Co., The	Engineers, Ironfounders and Tool Makers	Turton Street ...	Bolton ...	Bec, Bolton ...	191
Bolton Iron and Steel Co., Ltd.	Steel Manufacturers ...	Blackhorse Street	Bolton ...	Hammer, Bolton ...	161
Bolton, Rodger, & Son ...	Brassfounders, Coppersmiths etc. ...	44 and 46 Standishgate ...	Wigan	... ..	29
Broth, Joseph, & Brothers ...	Engineers and Crane Manufacturers	Union Foundry and Iron-works, Rodley	Leeds	Cranes, Rodley ...	20 Stanning
Brown & Co. ...	Engineers, Brass and Aluminium Founders	6 Mount Pleasant, Clerkenwell	London, W.C.	Bowenite, London	623 King's Cross
Brown, M'Lachlan & Co. ...	Marine and General Engineers, Boilermakers, Ironfounders and Contractors	Thistle Works ...	Paisley	Bow, Paisley ...	6
Bradbury & Co., Ltd. ...	Sewing Machine and Cycle Makers, and Makers of Automatic and Labour Saving Tools for Engineers	Wellington Works	Oldham ...	Rotary, Oldham ...	242
Bradbury, T. H. ...	Engineer	Radcliffe		

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NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.		No.
				
Browett, Lindley & Co., Ltd.	Steam Engine Makers	Sandon Works	Patricroft	10 Eccle
Bryan Donkin & Co., Ltd.	(See Donkin, Bryan, & Co., Ltd.)	...	...	...	...	...
Buckley & Taylor	Engineers, Millwrights and Iron-founders	...	...	Castle Ironworks	Oldham	8
Buckley, William, & Co.	Piston and Lathe Manufacturers	...	...	Millsands	Sheffield	2232
Buckton, Joshua, & Co., Ltd.	Engineers and Tool Manufacturers	...	...	Meadow Road	Leeds	724
Bumsted & Chandler	Engineers	...	...	Cannock Chase Engine Works	Hednesford	...
Burnet, Lindsay, & Co.	Engineers and Boilermakers	...	...	Moore Park Boiler Works, Govan	Glasgow	1513
Butler, J., & Co.	Machine Tool Makers and Iron-founders	...	...	Gibbet Street	Halifax	216
Butterworth & Dickinson	Iron and Brassfounders, Makers of Looms for Cotton, Linen and Worsted Goods, Winding, Warping, and Sizing Machines	...	...	Globe and Saunder Bank Ironworks; also West Gate Weaving Shed	Burnley	6, 6A, 6B
Bywater, William	Worsted, Woollen, Felt and Twine Machine Manufacturer and Iron and Brass Founder	...	...	Sweet Street Foundry	Leeds	1217
Caird & Co., Ltd.	Marine Engineers and Shipbuilders	...	...	Engine Works—Arthur St. Shipyard & Graving Dock —Dalrymple Street	Greenock	5 71
Caird & Rayner	Engineers and Coppermiths	...	...	777 Commercial Road	London, E.	210 East
Caledon Shipbuilding and Engineering Co., Ltd. (late W. B. Thompson & Co., Ltd.)	Engineers and Shipbuilders	...	...	Lillybank Engine Works, Caledon Shipbuilding Yard	Dundee	270 558

Callender's Cable and struction Co., Ltd.	Electrical Engineers, etc.	... ..	90 Cannon Street Factory—Belvedere, ...	... ..	London, E. C. Kent	Callender, London ...	5133 Han II Wood
Calvert & Co. ...	Ironfounders, Engineers and Mill- wrights	... ..	Hope Foundry and Rash- cliffe Ironworks	... ..	Huddersfield	... ..	171
Calvert, T. C. ...	Ironfounder ... ..	... ..	Pallion Foundry ...	... ..	Sunderland	Calvert, Pallion Foun- dry, Sunderland.	2002
Cameron, John ...	Maker of Steam Pumps and Ship- builders' Tools	... ..	Oldfield Road Ironworks, Salford	... ..	Manchester	Original, Manchester	874
Cammell, Charles, & Co., Ltd.	Steel Manufacturers ... ..	... ..	Cyclops Works, ...	... ..	Sheffield	Cammell, Sheffield ...	162
Campbell & Calderwood	Marine and General Engineers, and Centrifugal Pump Makers	... ..	Soho Engine Works	... ..	Paisley	Soho, Paisley	768
Campbells & Hunter ...	Engineers and Machine Tool Makers	... ..	Dolphin Foundry, Saynor Road, Hunslet	... ..	Leeds	Dolphin, Leeds	551
Campion Cycle Co., Ltd.	Cycle Manufacturers ... ..	... ..	Liverpool Street ...	... ..	Nottingham	Campion, Nottingham	363
Carmichael, James, & Co., Ltd.	Engineers, Millwrights, Boilermakers and Forgemasters	... ..	Ward Foundry ...	... ..	Dundee	Corliss, Dundee	853
Carrick & Ritchie ...	Engineers, Crane & Turbine Makers	... ..	Waverley Ironworks, Nor- ton Park, London Road	... ..	Edinburgh	Crane, Edinburgh	11027
Carrick & Wardale ...	Engineers and Founders ... ..	... ..	Redheugh Engine Works	... ..	Gateshead-on- Tyne	Wardale, Gateshead	3601
Carruthers, J. H., & Co.	Steam Pump Manufacturers	... ..	Hamilton St., Polmadie	... ..	Glasgow	Hoisting, Glasgow ...	106
Carter Brothers ...	Engineers and Millwrights ...	... ..	Bridge Street Ironworks	... ..	Rochdale	Carter Brothers, Rochdale	18 P.O.
Carter, James, & Sons	Iron and Brass Founders ... ..	... ..	Atlas Works ...	... ..	Stalybridge	Carter, Stalybridge	248 Nat.
Central Marine Engine Works, The (Sir W. Gray & Co., Ltd.)	Marine Engineers, Boilermakers, Iron and Brass Founders, Makers of Forgings, Stampings and Evaporators, Dry Dock Owners and Ship Repairers	... ..	Central Engine Works	... ..	West Hartlepool	Central, West Hartlepool	826
Chadburn & Son, Ltd.	Ships' Telegraph Manufacturers	... ..	11 Waterloo Road	... ..	Liverpool	Chadburn, Liverpool	147
Chadwick, James ...	Ironfounder and Range Maker	... ..	School Hill Ironworks	... ..	Bolton	... ..	...
Chaplin, Alexander, & Co.	Engineers and Cranemakers	Helen Street, Govan	Glasgow	Chaplin, Glasgow	...

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Chapman, Carverhill & Co. ...	Iron and Brass Founders ...	Dunn Street ...	Newcastle-on-Tyne	1189 Nat.
Chapman & Furneaux (late Black, Hawthorn & Co.)	Locomotive Builders, etc ...	East Street Works	Gateshead-on-Tyne	Blackthorn, Gateshead-on-Tyne	126 P.O. 2116 Nat.
Charlesworth, S., & Co. ...	Electrical and Printers' Engineers Machinists, etc.	Richmond Hill Ironworks Werneth	Oldham	Charlesworth, Engineers, Oldham	63
Clark, Bunnett & Co., Ltd. ...	Hydraulic and General Engineers and Founders	Works—New Cross Road, near S.E. Ry. Station City Office—22 Queen St., Chapside	London, S.E.	... ..	120 Deptford
Clarke, Chapman & Co., Ltd.	Electrical and General Engineers ..	Victoria Works, St. James Road	Gateshead-on-Tyne	Cyclops, Gateshead	137 and 138
Clark, George, Ltd. ...	Marine Engine and Boiler Builders	Southwick ...	Sunderland	Clark, Sunderland	4 P.O. 21 Nat.
Clark, J. & T. ...	Engineers, Millwrights, Brass and Ironfounders	Raglan Foundry ...	Bradford	...	...
Clarke, T. A. W. ...	Engineer and Machine Maker ..	Havelock Works	Leicester	Clarke, Havelock Works, Leicester	...
Clayton, Goodfellow & Co., Ltd.	General Engineers and Millwrights	Atlas Ironworks ...	Blackburn	Goodfellow, Blackburn	27
Clayton, Howlett & Co. ...	Engineers and Ironfounders ..	Atlas Works, Woodfield Road, Harrow Road	London, W.	Brickpress, London	...
Clayton, Son & Co., Ltd. ...	Makers of Gas Holders, Boilers, and all kinds of Constructional Ironwork	Hunslet ...	Leeds	Gas, Leeds	543
Cliffe & Co. ...	Woolleen Machine Makers ...	Longwood	Near Huddersfield	Cliffe, Milnsbridge	22 Milns- bridge
Clydebank Engineering and Shipbuilding Co., Ltd., The	Electrical Engineer and Motor Car Maker Marine Engineers and Shipbuilders	51 Sinclair Road, Ken- sington	London, W. Clydebank, N.B.	Infusible, London Shipyard, Clydebank	812 Glasgow 1 Clydebank
Clyne, Mitchell & Co. ...	Engineers and Boilermakers ..	Commercial Road	Aberdeen	Clyne Mitchell	438

Coates, Victor, & Co., Ltd.	Engineers, Boilermakers and Founders	Lagan Foundry ...	Belfast	...	Lagan Foundry, Belfast	93
Cochran & Co. ...	Engineers, Boilermakers, Launch and Boatbuilders, Iron-founders, Brassfounders and Shipsmiths	54 Duke Street and Bidston Wharf	Birkenhead	...	Multitube, Birkenhead	12
Cockburn, David	Safety Valve Maker ...	132 M'Neill Street	Glasgow	...	Cockburn, Glasgow	1281
Cockburn, George, & Co.	Safety Valve Makers ...	Sussex Street, Kinning Park	Glasgow	...	Pressure, Glasgow	1854
Cole, T. & W. ...	Engineers and Boilermakers	Park Road Ironworks, St. Ann's Rd., Burdett Rd.	London, E.	...	Slidevalve, London	277 Eastern
Combe, Barbour & Combe, Ltd.	Machinists, Engineers and Millwrights	... ..	Belfast	...	Combe, Belfast	18 and 19
Connell, Charles, & Co.	Shipbuilders ...	Scotstoun Shipbuilding Yard, Whiteinch	Glasgow	...	Connell, Whiteinch	1192
Cook, S., & Co. ...	Springmakers and Machinists	Albert Works ...	Bury	...	Cook, Bury	30
Cooke, W. ...	Engineer ...	Lenton Boulevard	Nottingham	...	... ..	515
Cooper Brothers, Ltd.	Loom Makers ...	Bethesda Street Foundry	Burnley	...	... ..	141
Corinthian Engineering Co., The	... ..	Grant Street	Nottingham	...	...	...
Cotton, Stephen, & Co.	Machine Makers and Ironfounders	... ..	Belfast	...	Stephen Cotton, Belfast	...
Coubro & Scrutton	Engine and Shipsmiths, Mastmakers, Joiners and Shipwrights	18 Billiter Street ...	London, E.C.	...	Coubro, London	5007 Eastern
Coulthard, T., & Co. ...	Printing Machine Makers ...	11 West India Dock Rd. Cooper Road	London, E. Preston	...	Coulthards, Preston	140
Coulthurst, H. J. & A.	Engineers and Millwrights ...	Robert Street Foundry	Darwen	...	... ..	11
Cowans, Sheldon & Co., Ltd.	Crane and Turntable Manufacturers	St. Nicholas Works	Carlisle	...	St. Nicholas, Carlisle	1013
Cowen, G. R., & Co. ...	Engineers, Founders and Boiler-makers	Beck Works	Nottingham	...	Cowen, Nottingham	87
Craig, A. F., & Co., Ltd.	Engineers, Ironfounders and Boiler-makers	Caledonia Engine Works Snowdon Works	Paisley	...	Craig, Paisley	20

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Deptford Dry Docks Co., Ltd.	Engineers and Ship Repairers	Deptford City Office—88 Bishops- gate Street	London, S.E. London, E.	Shoring, London ...	71 Deptford
Dewhirst, C. H.	Gas Engine Maker	Gas Engine Works ...	Keighley ...	Dewhirst, Engineer, Keighley	
Dewrance & Co.	Engineers, Makers of Engine and Boiler Fittings for High Pressure Steam	158 Great Dover Street ...	London, S.E.	Dewrance, London	
Dickinson, John, & Co.	Engineers and Machine Tool Makers	Devonshire Works ...	Keighley ...	Dickinson, Keighley	45
Dickinson, John, & Sons, Ltd.	Engine and Boiler Builders ...	Palmer's Hill Engine Works	Sunderland ...	Bede, Sunderland ...	24 P.O. 20 Nat.
Dickson, J. W. ...	Brassfounder	66 Plumber's Row, Whitechapel	London, E.		
Dixon, S., & Son	Brassfounders	Swinegate... ..	Leeds... ..	Brass, Leeds	197
Dobson & Barlow, Ltd.	Makers of Cotton Spinning Machinery	Kay Street Works ...	Bolton	Dobson's, Bolton ...	43
Dodd, Samuel	Machinist	Lyon Works, Werneth ...	Oldham	Dodd, Oldham ...	162
Donkin, Bryan, & Co., Ltd.	Gas and General Engineers, Mill- wrights, Founders and Machinists	55 Southwark Park Road, Bermondsey	London, S.E.	Donkin Company, London	662 Hop.
Douglass Brothers, Ltd.	Iron Manufacturers	Globe Ironworks... ..	Blaydon-on- Tyne	Douglass, Blaydon ...	6222
Douglas Forge Co., Ltd.	Engineers and Ironfounders... ..	Scholes Bridge	Wigan	... ..	54
Douglas Fraser & Sons	(See Fraser, Douglas, & Sons)				
Dougill, Alf., & Co., Ltd.	Gas and Oil Motor, Hydraulic, Steam and Hot Water Engineers	35 and 36 Great George St.	Leeds... ..	Dougill, Leeds	586
Downham, J., & Co. ...	Bleachers' Engineers	Barnbrook Ironworks ...	Bury	Barnbrook, Bury ...	37
Doxford, W., & Sons, Ltd.	Ship and Engine Builders ...	Pallion Yard	Sunderland ...	Doxford, Sunderland	413 & 414 Nat.
Dronsfield Brothers, Ltd.	Card Grinding Machinists ...	Atlas Works	Oldham	Atlas, Oldham ...	57
Dryden, Thomas	Millwright and Engineer ...	Grimshaw Street Foundry	Preston	Dryden, Preston ...	36

Dubs & Co.	Locomotive Engine Builders	London Road Glasgow Locomotive Works	Glasgow	Dubs, Glasgow ...	702
Duncan, Robert, & Co., Ltd....	Shipbuilders, Ship Repairers, Mast and Spar Makers	...	Port-Glasgow	Duncan, Port-Glasgow	59
Dunlop, David J., & Co., ...	Marine Engineers, Boilermakers and Shipbuilders	Inch Works	Port-Glasgow	Inch, Port-Glasgow	8
Dunsmuir & Jackson ...	Marine Engineers and Boilermakers	Windsor Street, Govan ...	Glasgow	Dunsmuir Jackson, Glasgow	1564
Dunston Engine Works Co., The	Engineers and Boiler Builders	...	Dunston-on- Tyne	Archer, Dunston-on- Tyne	1287
Dykes, G. & J. ...	Engineers	Bury Ground Ironworks	Bury		
Earle's Shipbuilding and Engineering Co., Ltd.	Engineers, Shipbuilders and Boiler- makers	...	Hull ...	Earles, Hull ...	61 and 78
Easton, Anderson & Goolden, Ltd.	Millwrights, Steam, Electric and Hydraulic Engineers, Boiler- makers and Founders	Erith Iron Works, Broad Sanctuary Cham- bers, Westminster	Erith, Kent ...	Eastons, Erith ...	4 Dartford
Eastwood, Walter ...	Brassfounder	Globe Brass Works	Ashton-under- Lyne	Egyptian, London ...	545 West- mins
Eclipse Machine Co., Ltd. ...	Cycle, Sewing and Knitting Machine Makers	Rochdale Road ...	Oldham	Eclipse, Oldham	
Edgar Allen & Co., Ltd. ...	(See Allen, Edgar, & Co., Ltd.)				
Edie, Henry, & Co. ...	Iron and Brass Founders	The Bow Foundry, Bow Victoria Foundry, Canning Town, E.	London, E. ...	...	31 Stratford
Edmeston, Archd., & Sons ...	Engineers to Bleachers, Dyers, etc.	Cannon Street Iron Works, Adelphi, Salford	Manchester ...	Edmeston, Adelphi, Salford	1595
Edmondson, John A. ...	Electrical Engineer	Globe Electrical Works, Kirkstall Road	Leeds...	Armature, Leeds ...	1086
Edwards, George, & Co. ...	Engineers and Tool Makers	Hercules Iron Works	Johnstone	Edward, Johnstone	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Frost & Sons	Brassfounders	8 Allen Street, Goswell Rd	London, E.C.		
Fullerton, Hodgart & Barclay, Ltd.	Engineers, Millwrights, Iron-founders, and Makers of Hydraulic Machinery	Vulcan Foundry & Engine Works	Paisley	Vuican, Paisley ...	63
Furness, Sir C., Westgarth & Co., Ltd.	Marine and General Engineers and Boilermakers	Commercial Street ...	Middlesbro'	Westgarth, Middlesbro'	21 P.O. 202 Nat.
Furnival & Co.	Printers' Engineers	Reddish Ironworks, near Stockport	Manchester ...	Furnival, Reddish ..	30 Stockport
Gadd, Thomas (Hulse & Co., Ltd., Proprietors)	Millwrights and Machinists	Ordsall Works, Regent Bridge, Salford	Manchester ...	Gadd, Manchester ..	1427
Galloways, Ltd.	Engineers and Boilermakers	Knott Mill Ironworks ... Branch Ironworks, Ardwick	Manchester ...	Galloway, Manchester	195 195A
Gazelle Cycle Co., ...	Cycle Manufacturers	17 Philpot Lane Russell Street	London E.C. Nottingham	Rought, London .. Gazelle, Nottingham	2866 Avenue 799
General Electric Co., Ltd., The	Electrical Engineers and Manufacturers	Peel Works, Adelphi, Salford.	Manchester ...	Sparkless, Manchester	2186
		Warehouse and Show-room—Electricity Buildings, Victoria Bridge	... ..	Induction, Manchester	1643
Gibson, J., & Co., ...	General Pattern Makers, Machine Joiners and Wood Turners	Alpha Street, Dewsbury Road	Leeds ...	Patterns, Leeds .	180
Gimson & Co. (Leicester), Ltd.	Engineers, Ironfounders, Boilermakers and Machinists	Vulcan Works	Leicester ..	Gimson, Leicester ...	6 and 734
Gimsons, Ltd.	Engineers and Millwrights ...	Staly Ironworks	Stalybridge ...	... ..	120
Ginman, R., & Son ...	Engineers	Eton Road	Plumstead, Kent	Gimmans, Founders, Plumstead, Kent	

Glover, M., & Co. ...	Wing and Dry Dock Proprietors ...	Green Lane Foundry ...	Leeds ...	Glovers, Engineers, Leeds ...	984
Good & Menzies, Ltd. (late Thompson & Stather)	Engineers ...	Green Lane Foundry ...	Hull ...	Iron, Hull ...	66
Goodwin, Arnold, & Son ...	Engineers, Millwrights, and Machinists ...	56 Summer Street, South-wark Bridge Dundee Foundry ..	London, S.E. Dundee ...	Shaftman, London Gourlay, Dundee ...	569
Gourlay Brothers & Co. ...	Fuel Economiser Manufacturers ..	Wakefield Economiser Works 13 Fenchurch Avenue ... Blackwall Yard ... Smithfield Ironworks ... Surrey Works, Blackfriars Road ...	Wakefield ... London, E.C. London, E. Leeds... London, E.	Economiser. Green, Blackwall, London Smithfield, Leeds ..	43 203 Eastern 158
Green, E., & Son, Ltd. ...	Shipbuilders, Engineers and Dry Dock Proprietors	Albion Works, Victoria Foundry and Cape Mills 16 Great George Street, Westminster High Street ...	Greenock ... Leeds... London, S.W. Belfast	Scott, Greenock ... Greenwood, Leeds ... Outflank, London	114 270
Green, R. & H., Ltd. ...	General Engineers and Boilermakers	Billiter Buildings Prince of Wales Road, Custom House Fountain House, Dundee Street	London, E.C. London, E. Edinburgh ...	Gregides, London Greig, Edinburgh ...	56 Avenue 554 Albert 72 Western
Green, Thomas, & Son, Ltd. ...	Marine Engineers, Boilermakers and Founders Engineers and Tool Makers, Electrical Engineers, Cartridge Makers, Torpedo Makers, etc.	Southall St., Ordsall Lane, Salford, Motherwell Crane and Engine Works Central Engineering Works	Manchester Motherwell ... Oldham	Brake, Manchester ... Grieve, Motherwell Günther, Oldham ...	613 317
Greenock Foundry Co., The	Ship Joiners, Shipwrights, Timber Merchants and Refrigerator Chamber Builders (Ship or Land) Engineers and Founders to the Paper, Printing, Bookbinding, Lithographic, Tobacco and Rubber Trades				
Greenwood & Batley, Ltd. ...	Brake and Injector Manufacturers, Engineers, etc. Engineers and Cranemakers				
Gregg, W., Sons & Phoenix	Engineers ...				
Gregson & Co. ...	Engineers ...				
Greig, John, & Sons ...	Engineers ...				
Gresham & Craven, Ltd. ...	Engineers ...				
Grieve, John, & Co. ...	Engineers ...				
Günther, W., & Sons ...	Engineers ...				

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Gwynne & Co. ...	Hydraulic and General Engineers ...	Brooke Street Holborn	London, E. C.	Gwynnegram, London	65995 Holborn
Hacking & Co. ...	Makers of Looms and Preparation Machinery	Lord Street	Bury ...	Hacking, Bury	31
Hague, B., & Co. ...	Hosiery Machine Maker	Roden Street	Nottingham ...	.. ..	556
Haigh, John, & Sons, Ltd.	Machinists	Firth Street	Huddersfield	Haighs, Machinists, Huddersfield	111
Haigh, W. B., & Co., Ltd.	Sawmill Engineers	Globe Iron Works, Plane Street	Oldham	Haigh, Oldham	146
Haley, E. & W. H.	Ironfounders and Cast Iron Pipe Makers	Thornton Road	Bradford	Castings, Bradford	467
Hall, A., & Co. ...	Shipbuilders, Engineers and Boiler-makers	York Street	Aberdeen	Hall, Aberdeen	290
Hall, J. & E., Ltd.	Engineers and Makers of Refrigerating Machinery	Dartford Ironworks	Dartford	Hallford, Dartford	7 Dartford
Hall, J. P., & Co. ...	Electrical and General Engineers	23 St. Swithin's Lane Blackriding Ironworks, Werneth	London Oldham	Hallford, London Dynamo, Oldham	846 Bank 300
Hall, John, & Son	Ironfounders and Machinists	Union Ironworks, Park St.	Oldham	Ironfounders, Oldham	161
Hall, Russell & Co. Ltd.,	Engineers, Boilermakers and Shipbuilders	York Place	Aberdeen	Halrussel, Aberdeen	273
Hall & Stells	Makers of all kinds of Worsteds Machinery and Machines for Mohair and Silk	Park Works	Keighley	Stells, Keighley	10
Hamer, S. H.	Tool Maker	The Lathe Chuck Works, Range Lane	Halifax	Hamer, Range Lane Halifax	
Hamilton, William, & Co. ...	Shipbuilders	Glen Shipbuilding Yard	Port-Glasgow	Hamilton, Port-Glasgow	23
Hamilton, Woods & Co., Ltd.	(See Woods, Hamilton, & Co., Ltd.)				
Hanna, Donald & Wilson	Engineers, Shipbuilders, and Ironfounders		Paisley	Donald, Paisley	72

Harfield & Co., Ltd.	...	Engineers	...	Blaydon Ironworks	...	Blaydon-on-Tyne	Harfield, Blaydon-on-Tyne	29 Nat.
Hargreaves, Lloyd	...	General Patternmaker	...	Arundel House, Victoria Embankment	...	London	Harfield, London	
Harling & Todd	...	Ironfounders, etc.	...	Gibbet Hill	...	Halifax		
Harpers, Ltd.	...	Makers of Accessories for the Transmission of Power	...	Rosegrove Ironworks	...	Burnley	...	190
Harrison Engine Co., Ltd., The	...	Engineers and Steam Steering Gear Makers	...	...	...	Aberdeen	Harpers, Aberdeen	549
Harrison & Hammond	...	Engineers and Ironfounders	...	Ocean Works, Cross Lane	...	Manchester	Steering, Manchester	1734 Nat.
Hartley, Binns & Co.	...	Engineers' Tool Makers	...	Vicarage Street Works	...	Wakefield	Harrison & Hammond, Wakefield	71
Hartnell, Wilson	...	Electrical Engineer	...	West End Tool Works	...	Halifax		
Harvey, G. & A.	...	Engineers, Millwrights, Machine Tool Manufacturers, & Factory Architects	...	Volt Works	...	Leeds	Hartnell, Leeds	282
Haswell, J. Stenson, & Co.	...	Electrical and General Engineers	...	Albion Works, Woodville Street, Govan	...	Glasgow	Gandah, Glasgow	1594
Hathorn, Davey & Co.	...	Pumping Machinery for Mines and Water Works; Makers of Hydraulic Plant	...	Watling Street	...	Leicester		
Hattersley, G., & Sons, Ltd.	...	Loom Makers, and Makers of Weaving Machinery of every description	...	Sun Foundry	...	Leeds	Hathorn, Leeds	524
Hawthorns & Co., Ltd.	...	Engineers, Shipbuilders and Forge-masters	...	North Brook Works	...	Keighley	Hattersley, Keighley	6
Hawthorn, R. & W., Leslie & Co., Ltd.	...	Marine Engineers, Locomotive Builders and Shipbuilders	...	Leith Engine Works	...	Leith	Hawthorns, Leith	431
Haxby & Sewells	...	Ironfounders	...	Granton Iron Works	...	Granton		
Hayward Brothers & Eckstein, Ltd.	...	Engineers and Ironfounders	...	St. Peter's	...	Newcastle-on-Tyne	Hawthorns, Newcastle-on-Tyne	433 P.O. 1233 Nat. 370 P.O. 1099 Nat.
Heald, John	...	Engineer, Millwright, Ironfounder and India Rubber Machinist	...	Hebburn	...	...	Leslie, Hebburn	
	...		...	Bowling Green Foundry, Well Lane	...	Halifax		
	...		...	187-193 Union St., Borough	...	London, S.E.	Hayward Brothers, London	193 Hop.
	...		...	Phoenix Foundry	...	Chorley	John Heald, Chorley	21

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Heap, William, & Co., Ltd. ...	Engineers' Tool Makers ...	Oldham Road Tool Works	Ashton under-Lyne	W. Heap, Ashton-under-Lyne	
Henderson, D. & W., & Co. ...	Marine Engineers and Shipbuilders, Engine, Boiler and Ship Repairers	Engine Shop—190 Elliot St. Shipyard, Graving Dock, & Slip Dock—Meadow-side, Partick	Glasgow	Finnieston, Glasgow Meddosi, Glasgow	3343 3029
Henderson, John M. ...	Engineer, Cranemaker, Contractors, Quarriers' and Stoneworkers' Machinery Maker	207 King Street and 104 West North St. (Goods)	Aberdeen	Cranes, Aberdeen	162
Henley's, W. T., Telegraph Works Co., Ltd.	Electrical Engineers, etc. ...	27 Martin's Lane, Cannon Street	London, E.C.	A. B. C. (4th ed.) and Engineering Tel. Codes used.) Henley's Works, London	734
Herbert, E. G. ...	Engineers' Tool Maker ...	Cornbrook Park Works, Cornbrook	Manchester		
Hetherington, John, & Sons, Ltd.	Cotton, Wool and Silk Machinists and Heavy Tool Makers ...	Vulcan and Ancoats Works—Pollard Street Phoenix Works—Chapel Street	Manchester	Heth, Manchester	230, 1365 and 1783 383
Hick, Hargreaves & Co., Ltd.	Engineers, Boilermakers and Millwrights	Soho Iron Works, Crook Street	Bolton	Hick, Bolton	16
Higginbottom & Mannock ...	Crane and Hoist Makers ...	Crown Iron Works, West Gorton	Manchester	Crown, Gorton Brook	1577
Hill, F. J. ...	Engineer, Gas Engine Expert	13 Bath Lane ...	Leicester	.. .. .	543
Hind & Lund, Ltd. ...	Flour and Rice Mill Engineers, Grinding and Paint Mill Machinists	Atlas Works, Edward St.	Preston	Atlas, Preston	125
Hodge, Samuel, & Sons, Ltd.	Boilermakers, Engineers and Ship Repairers	Union Ironworks, Millwall	London, E.	Hodge, Millwall London.	
Hodges & Todd ...	Electrical Engineers ...	30-42 Hampstead Road	London, N.W.	Ammeter, London	5115 Gerrard
Hodgson, H. E., & Co. ...	Engineers, Machine Tool Makers, and Makers of Wire Machinery	Brookhouse Works	Cleckheaton	Hodgson, Brookhouse Cleckheaton	8324
Holden & Brooke, Ltd. ...	Engineers and Injector Manufacturers	Sirius Works, Heywood Street, West Gorton	Manchester	Influx, Manchester	3663
Holdsworth & Sons ...	Boilermakers ...	Leeds Road ...	Bradford	Holdsworth, Boiler-makers, Bradford	446

Holliday, Read, & Sons, Ltd.	Electrical and General Engineers ...	... ..	... ..	Huddersfield	Holliday, Huddersfield	115
Holmes, C. D., & Co.	Engineers, Boilermakers and Ship Repairs	Alfred Street	... ..	Hull	Compound, Hull	345
Holmes, J. H., & Co.	Manufacturing Electrical Engineers and Contractors	Portland Road	... ..	Newcastle-on-Tyne	Holmes, Newcastle-on-Tyne	1226, P.O. 278
		17 Soho Square	... ..	London, W.	Vermillionette,	2691 Gerrard
		Examiner Buildings, Strutt Street	... ..	Manchester	Compound, Manchester	25 Nat.
Holroyd, Horsfield & Wilson, Ltd.	Engineers	27 Bothwell Street	... ..	Glasgow	Efficiency, Glasgow	4984
		Larchfield Foundry	... ..	Leeds	Larchfield Foundry, Leeds	534
Holroyd, John, & Co., Ltd.	Tool Makers, Engineers and Machinists	Perseverance Works, Milnrow	... ..	Near Rochdale	Knit, Milnrow	206 Rochdale
Holt, Thomas, Ltd.	Textile Machinists	Atlas Iron Works, Molesworth Street	... ..	Rochdale	Atlas, Rochdale	122
Hopkinson & Cope	Printers' Engineers, etc.	Albion Works, 103 Farrington Road	... ..	London, E.C.	Wharfedale, London	607 Holborn
Horner, George	Flax Machine Maker, Engineer, Millwright and Ironfounder	Clonard Foundry	... ..	Belfast	Horner, Belfast	107
Hosiery Machine Building Co., The, (Kiddier Brothers)	Hosiery and Lace Machine Builders	Bell Street Works	... ..	Nottingham	Machine, Nottingham	143
Houston & Hamilton	Machine Makers, Brass and Ironfounders	Belfast Foundry	... ..	Belfast	Belfast Foundry, Belfast	550
Howden, James, & Co.	Engineers	195 Scotland Street	... ..	Glasgow	Howden, Glasgow	1467
Hoyle, Elkanah, & Sons, Ltd.	Engineers, Ironfounders, Millwrights and Machine Makers	Waterside Works	... ..	Halifax	Elkanah, Halifax	183
Hoyle & Preston	Machine Makers	Globe Works	... ..	Keighley	Combs, Keighley	30
Hudson, Hall & Griffith (late W. Hudson & Co.)	Machine Tool Makers	Dalton Tool Works, Fleece Street	... ..	Keighley	Hudson, Toolmakers, Keighley	126
Hudswell, Clarke & Co.	Locomotive Engine Makers	Railway Foundry	... ..	Leeds	Loco, Leeds	504
Hulse & Co., Ltd.	Machine Tool Makers	Ordsal Works, Regent Bridge, Salford	... ..	Manchester	Esluh, Manchester	1427
Humber & Co., Ltd.	Cycle Manufacturers	Beeston	... ..	Nottingham	Humber, Beeston	1222

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Humber, Synyer & Co., Ltd.	Cycle Manufacturers ...	Crocus Street ...	Nottingham	Humber, Crocus St., Nottingham	765
Humphrys, Tennant & Co. ...	Marine Engineers ...	Deptford Pier ...	London, S.E.	Humphrys, London	27 Deptford
Hunslet Engine Company, The	Engineers and Locomotive Builders	Hunslet Engine Works ...	Leeds	Engine, Leeds	528
Hunter & English ...	Engineers, Millwrights, Iron and Brass Founders	202 Bow Road, Bow ...	London, E.	Venator, London	6045 Stratford
Hutchinson, Hollingworth & Co., Ltd.	Loom Makers Woollen and Worsted Preparing Machinery	Dobcross Loom Works... Atlas Works, Colne Road	Dobcross Huddersfield	Foundry, Dobcross... Atlas, Huddersfield	1710 143
Ince Forge Co. ...	Iron and Steel Forgings	Ince Forge ...	Wigan	Forgings, Wigan	47
Inglis, A. & J. ...	Marine Engineers and Shipbuilders. Engine, Boiler and Ship Repairs	Engine Shop—64 War- roch Street Shipyard and Slip Dock —Pointhouse	Glasgow	Inglis, Glasgow ...	1328 3988
Jackson & Brother ...	Engineers, Millwrights, Boiler-makers, Iron and Brass Founders, Bleachers' and Dyers' Machinists	Wharf Foundry	Bolton	Jackson, Bolton	34
Jackson, P. R., & Co., Ltd.	Engineers (Electrical and Mechanical), Steel and Iron Founders, Makers of Dynamos and Motors	Salford Rolling Mills, Salford	Manchester	Jackson's, Manchester	623
Jardine, John ...	Lace Machine Builder ...	Deering Street Works ...	Nottingham	Jardine, Nottingham	295
Jefferson, Joseph, & Brothers	Machine Makers, Iron and Brass Founders	Brown Royd Works, Thornton Road	Bradford	... ..	518

Jessop & Appleby Brothers (Leicester and London), Ltd.	Coppersmiths, etc. General Engineers	...	...	St. Margarets	Leicester	Jessop, Leicester	73
Jessop, Wm., & Sons, Ltd.	Steel Manufacturers	...	...	Brightside Works	Sheffield	Jessops, Sheffield	152 and 2076
Johnson & Phillips	Electrical, Telegraphic and Hydraulic Engineers	...	...	Victoria Works	Old Charlton	Juno, London	1010 Avenue
Johnson, Thomas, & Co.	Ship Joiners, Shipwrights, Saw Millers, Timber Merchants, and Builders of Insulated Chambers	...	...	Gun Lane Saw Mills, Limchouse	London, E.	Buxus, London	23 Woolwich 162 Eastern
Johnson, William, & Sons	Brick Grinding and Milling Machinery Manufacturers	...	...	Castleton Foundry	Leeds	Ronksley, Armley	387
Johnston, R., & Co., Ltd.	Brassfounders	...	...	28 Little Alice Street	London, E.		
Jones, John, & Sons	Shipbuilders, Marine and Hydraulic Engineers, Boilermakers, Forge and Founders	...	...	Cotton Street	Liverpool	Steamship, Liverpool	198 and 199
Jopling, E., & Sons	Iron and Steel Founders	...	...	Dunning Street Foundry	Sunderland	Castings, Sunderland	352 Nat.
Keighley Electrical Engineering Co., Ltd., The	Electrical Engineers	...	...	Alexandra Works,	Keighley	Electric, Keighley	113
Keighley Engineering Co.	Engineers, Lathe and Machine Tool Makers	...	...	Waddington Street	Keighley	Engineering, Keighley	
Keighley, George	Looms, Winding, Warping and Sizing Machine Maker	...	...	Bank House Ironworks, Woodfield	Burnley	...	172 and 172A
Kendall & Gent	Machine Tool Makers	...	...	Victoria Works, Belle Vue	Manchester	Tools, Manchester	5147
Kendall, G. H., & Co.	Brassfounders and Engineers	...	...	...	Huddersfield		
Kenworthy, Royston & Co.	Machinists	...	...	East Parade	Huddersfield	...	184
Kenworthy, Taylor & Co.	Engineers, Iron and Brass Founders	...	...	Barnsley Foundry	Barnsley	Kenworthy, Taylor	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Kerr, Stuart & Co. ...	Engineers and Ironfounders...	California Works Head Office—20 Bucklers- bury Mansion House Bell Street Works	Stoke-on-Trent London, E.C.	California, Stoke-on-Trent	2013
Kiddier Brothers (The Hosiery Machine Building Co.)	Hosiery and Lace Machine Builders		Nottingham ...	Machine, Nottingham	143
Kiddier, J., & Son ...	Hosiery Machinists ...	Globe Works, Waterway Street	Nottingham ...	Kiddier, Nottingham	252
Kilburn, R., & Sons ...	Ironfounders and Machine Makers...	Perseverance Works, Elland Road	Leeds...	... ..	1237
Kincaid, John G., & Co. ...	Marine Engineers, Boilermakers, Smiths, Ironfounders, and Ship Repairers	East Hamilton Street	Greenock	Kincaid, Greenock...	95
Kirby Banks Screw Co., Ltd.	Bolt and Screw Manufacturers	Albert Screw Works, Meadow Lane	Leeds...	Hexagon, Leeds	541.
Kirkaldy, John, Ltd. ...	Makers of Marine Auxiliary Machinery	101 Leadenhall Street Works—Netteswell Cross	London Essex ...	Compactum, London Kirkaldy's Works Netteswell Cross	...
Kirkham, J. & W. ...	Brassfounders ..	Lark Street Brassworks...	Bolton	Brass, Bolton	96
Kirkstall Forge Co. ...	Iron and Steel Manufacturers	Kirkstall Forge ..	Near Leeds	Forge, Kirkstall	147
Kitson & Co. ...	Locomotive and General Engineers	Airedale Foundry	Leeds...	Airedale, Leeds	511
Kitson J., & Sons, Ltd.	Engineers ...	Valley Works, Valley Road, and Canal Road	Bradford	... ..	1447
Laird Brothers ...	Shipbuilders, Engineers and Boiler- makers	Birkenhead Ironworks	Birkenhead	Laird, Birkenhead	3
Lambeth Brass and Iron Co., Ltd., The	Hydraulic, Sanitary and Gas En- gineers, Brassfounders, etc.	Short Street, Lambeth	London, S.E.	Diaphragm, London	796 Hop

Lang, John, & Sons	Tool Makers	...	...	...	Pendleton, Mary Street	Johnstone	Lang, Johnstone	559
Larmuth, Thomas, & Co.	Engineers	...	...	...	Todleben Ironworks, Cross Lane, Salford 80 St. John Street	Manchester	Hirnant, Manchester	956
Lawson, J.	Brassfounder	...	...	...	Hope Foundry	Leeds...	Lawsons, Leeds	101
Lawson, S., & Sons	Flax, Tow, Hemp and Jute Machine Manufacturers, and Engineers	...	...	...	Victoria Works, Water St.	Rochdale	Leach, Water Street, Rochdale	5490 Bank 3857 882
Leach & Co.	Woollen and Asbestos Machinists	...	...	...	35 Queen Victoria Street 28 Deansgate	London, E.C.	Preferment, London	786
Bedward, T., & Co.	Engineers	...	...	...	Laws Foundry, Lochee	Manchester	...	107
Lee, Croll & Co.	Ironfounders, Engineers and Machine Makers	...	...	...	Providence Works, Stamford Street	Leeds...	Pumps, Leeds	1487
Leeds Engineering and Hydraulic Co., The	Hydraulic Engineers	...	...	...	Armley	Leeds...	Vulpes, Leeds	3088
Leeds Forge Co., Ltd.	Steel Manufacturers, Makers of Furnaces for Marine and Land Boilers, Pressed Steel Under Frames, and Bogies for Railway Rolling Stock	...	...	...	Hope Works, Kirkstall Road	Leeds...	Machinery Stores, Leeds	7
Leeds Machinery Stores Co., Ltd., The (Rawlinsons, Ltd.)	Millwrights, Engineers and Machine Makers	...	...	...	100 Clyde St., Anderston	Glasgow	Lees, Glasgow	539 Albert Dk 5107 Eastern 642
Lees, Anderson & Co.	Millwrights, Engineers, Boilermakers and Shipbuilders	...	...	...	Soho Ironworks	Oldham	Asa, Oldham	1534
Lees, Asa, & Co., Ltd.	Machinists (Textile)	...	...	...	11 London Street and Royal Albert Docks Palmerston Road	London, E.	Outwork, London	215
Lester & Perkins	Ship Repairers	...	...	...	...	Aberdeen	...	
Lewis, John, & Sons	Engineers and Boilermakers	...	...	...	...	...	...
Lindsay Burnet & Co.	(See Burnet, Lindsay, & Co.)	...	...	...	...	...	...
'Little John' Cycle Co., Ltd.	Cycle Manufacturers	...	...	...	Holland Street, Hyson Green	Nottingham	Thorough, Nottingham	
Livesey, Henry, Ltd.	Makers of Looms, Winding, Warp- ing and Sizing Machines	...	...	...	Greenbank Ironworks	Blackburn	Livesey, Blackburn	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Lloyd Hargreaves	(See Hargreaves, Lloyd.)				
Lobnitz & Co., Ltd.	Marine Engineers, Ship and Dredger Builders	... ..	Renfrew	Lobnitz, Renfrew	4
London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., The	Marine Engineers, Shipbuilders, Boilermakers and Brassfounders	Engine Works—53 Anderson Quay Boiler Works—172 Lancelfield St. Middleton Shipyard, Govan	Glasgow	Middleton, Glasgow	665
London Graving Dock Co., Ltd.	Ship and Engine Repairers	114 Fenchurch Street and West India Dock	London, E.C.	Augmented, London	1034
Loudon Brothers	Engineers' Machine Tool Makers	Clyde Engineering Works	Johnstone	Loudon Brothers, Johnstone	26
Low, James F., & Co.	Machine Makers, Iron and Brass Founders	Office—46 Waterloo Street Monifieth Foundry, Monifieth	Glasgow Near Dundee	Achilles, Glasgow	553
Luke & Spencer, Ltd.	Manufacturers of Grinding and Polishing Machinery, Emery Wheels, etc.	Broadheath	Near Manchester	Emery, Broadheath	1 Monifieth
Lytham Shipbuilding Co.	Shipbuilders and Engineers	... ..	Lytham	Sternwheel, Lytham	49 Altrincham
M'Dowall, John, & Sons	Saw Mill and General Engineers	Walkinshaw Street	Johnstone	Macdowall, Johnstone	59
M'Gee, Walter, & Son	Engineers and Machinists	Albion Works	Paisley	Albion, Paisley	137
Macgregor Cycle and Engineering Co., Ltd.	Cycle Manufacturers	Aspley Lane	Nottingham	Macgregor, Nottingham	845
M'Kie & Baxter	Engineers, Shipbuilders and Boiler-makers	Copland Works, Govan	Glasgow	Calidad, Glasgow	1891

makers General Engineers and Makers of Traction Engines	works Midland Engine Works ...	Leeds	Aberdeen
M'Laren, J. & H. ...	St. George's Foundry, Crawford Street	Leeds	642
McNaught, John & William.	Colonial Ironworks, Helen Street, Govan	Rochdale	141
M'Neil, John, & Co. (formerly Aitken, M'Neil & Co.)	Crowther Street, Salford	Glasgow	1562
Madan, Charles S., & Co. ...	Office -- St. George's House, 8 Eastcheap	Manchester	2733
Manganese Bronze and Brass Co.. Ltd.	Works -- St. George's Wharf	London, E.C.	2215 Avenue
Manlove, Alliot & Co., Ltd.	Bloomsgrove Works	Deptford, S.E.	9 Deptford
Mann & Charlesworth	Canning Works, Dewsbury Road	Nottingham	274
Mann, G., & Co. ...	Elland Road	Leeds	1335
Manning, Wardle & Co. ...	Boyne Engine Works, Chapel Hill, Hunslet	Leeds	514
Marchant, G. M. ...	Brass and Iron Works, Rashcliffe	Huddersfield	210
Marnar, G. W. ...	193 Bermondsey Street	London, S.E.	
Marsden, Ellis ...	15 Argyle Street	Liverpool	828
Marsden, John, & Son	188 Regent Road Bridge Street	Liverpool	2641 Bootle
		Birkenhead	127

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Marsden, Samuel, & Son, Ltd.	Bolt and Nut Manufacturers and Makers of Machines for making and finishing the same; also Oil Fuel Furnaces for heating Iron or Steel.	London Road	Manchester ...	Bolts, Manchester ...	336 and 606
Marshall, Fleming & Jack ...	Engineers and Cranemakers ...	Dellburn Works	Motherwell ...	Dellburn, Motherwell	
Marshall, Sons & Co., Ltd....	General Engineers	Britannia Works and Trent Works	Gainsborough	Marshalls, Gainsborough	10
Mason, John	Textile Machinist	Globe Works	Rochdale ...	Masons, Rochdale ..	48
Masson, Scott & Co., Ltd.	Engineers and Millwrights ...	York Place, New Wands- worth	London, S.W.	Massioun, London...	28 Battersea
Mather, Alex., & Son	Engineers and Founders	Orwell Works, Dalry Road	Edinburgh ..	Mather, Edinburgh	62 West
Matthews, William, & Co. ...	Artesian Well Engineers and Pump Makers	Brookside Works, Queen's Road, Miles Platting	Manchester ...	Matthews, Harpurhey Manchester	
Maud & Turner	Engineers and Machine Tool Makers	Perseverance Works, Gibbet Street	Halifax ..	Maud Turner, Halifax	67
Maudslay, Sons & Field, Ltd.	Marine and General Engineers and Boilermakers	110 Westminster Bridge Road	London, S.E.	Maudslays, London	681 Hop.
Mavor & Coulson, Ltd. ...	Engineers and Electricians and Dynamo Makers	47 King St., Mile-End ...	Glasgow ...	Prodigious, Glasgow	1369
Mayes, John	Brassfounder, Wheel Cutter, Machinist, and Model Maker	Red Lion St., Clerkenwell	London		
Meadowcroft, C. H., & Brother	Brassfounders and Finishers ...	Church Street	Dukinfield ..	Meadowcroft Brothers Dukinfield	213 Ashton
Mechan & Sons	Engineers	Scotstoun Ironworks ...	Glasgow ...	Nautical, Glasgow ...	871
Meldrum Brothers	Engineers	Atlantic Works, City Rd., and Branches	Manchester ...	Meldrum, Manchester	2437
				Meldrum, London	1674
				Meldrum, Leeds	5964 Avenue.
				Cronul, Newcastle-	1391
				on-Tyne	1461
Mellor, Moses, & Sons, Ltd.	Josiery Machinists	Lee Works, Arkwright Street	Nottingham	Meldrum, Paris Mellor, Nottingham	113

Manufacturers, Engineers and Tool-makers	Tools and Bright Nut and Bolt Maker	Hollins Ironworks, Hollinwood	Near Manchester Leeds...	Mercer, Hollinwood	
Mercer, Edward	Hydraulic and General Engineer, Iron and Brass Founder	Sheepscar Foundry	Leeds...	Hydraulic, Leeds	214
Middleton, Robert	Engineers' Millwrights, Printing and Brickmaking Machine Makers and Ironfounders	Loman Street	London, S.E.	Loman, London	597 Hop.
Middleton, Thomas, & Co.	Engineers and Machine Tool Makers	West End Toolworks, Richmond Road	Bradford	Midgley & Sutcliffe, Bradford	1680
Midgley & Sutcliffe	Printing Engineers	65 Nicolson Street	Edinburgh	Richard, Edinburgh	656
Miller & Richard,	Engineer	...	Oldham	...	...
Mills, John	Engineers and Brassfounders	Milton House Works, Abbeyhill	Edinburgh	Milne, Edinburgh	792
Milne, James, & Son, Ltd.	Ironfounders	Millfield Foundry	Belfast	...	466
Moore, James, & Sons, Ltd.	Makers of Friction Clutches, Colliery Appliances and Pumps	36 Victoria Road, Holbeck	Leeds	Korte, Leeds	1573
Moore & Korte	Anchor and Shipsmiths, Engineers, etc.	25 High Street, Poplar	London, E.	Employment, London	248 Eastern & Shipping Exchange, London.
Moore, W. & E.	Brassfounders	Victoria Brass and Iron Works	Stalybridge	Moorhouse, Stalybridge	51
Moorhouse, Sydney, & Co.	Brassfounders	Cocker Hill Works	Stalybridge	Cockerel, Stalybridge	...
Moorhouse, Walter, & Co.	Engineers	3 Old Street	London, E.C.	Expansion, London	784 Holborn
Moreland, Richard, & Son, Ltd.	Ironfounder	Dean Clough Foundry	Halifax	...	...
Morley, Y. H. (late Scarr & Morley)	Brassfounders	27 and 29 Lancaster St., Borough Road	London, S.E.	Funderia, London	...
Morris, J., & Co.	Engineers and Millwrights, also Paper Machine Wire Cloth Manufacturers	Jane Street	Leith	Morrison, Jane Street, Leith	40 and 99
Morrison, W., & Sons		...	...	...	...

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Morton & Edwards ...	Brassfounders	Hollins Street Works ...	Stalybridge		
Morton, S. & H., & Co.	Engineers, Boilermakers and Iron Shipbuilders	Victoria Dock	Leith ...	Morton, Leith ...	4047
Mudd, W. R., & Co.	Engineers and Machinists ...	Beatrice Road	Leicester ...	Mudd, Leicester ...	349
Mui. & Houston, Ltd.	Marine Engineers and Boilermakers	33 Portman Street ...	Glasgow ...	Beatitude, Glasgow	1553
Muir, William, & Co., Ltd. ...	Machine Tool Makers	Sherbourne Street ...	Manchester ..	Britannia, Manchester	529
Murdoch & Murray	Shipbuilders ... ..	... ..	Port-Glasgow	Murdoch Murray, Port-Glasgow	32
Musgrave Brothers	Hydraulic and General Engineers ...	Crown Point Foundry, East Street	Leeds ...	Musgrave, East Street Leeds	1226
Musgrave, John, & Son, Ltd.	Engineers, Boilermakers and Millwrights	Globe Ironworks, Kay Street	Bolton ...	Musgrave, Bolton ..	67
Napier Brothers, Ltd.	Engineers	100 Hydepark Street ...	Glasgow ...	Windlass, Glasgow	714
Napier, R., & Sons, Ltd. ...	Marine Engineers, Shipbuilders, Engine, Boiler and Ship Repairers	Engine and Boiler Works — Lancefield Street Shipyard—Govan	Glasgow ...	Napier, Glasgow ...	3363
Nasmyth, Wilson & Co., Ltd.	Locomotive, Hydraulic and General Engineers	Bridgewater Foundry, Patricroft	... ..	... ..	1603
National Gas Engine Co., The, Ltd.	Gas Engine Makers	Wellington Road	Near Manchester Ashton-under-Lyne	Nasmyth, Patricroft National, Ashton-under-Lyne	5 Eccles 43
Needham Brothers & Brown	Engineers, Iron and Brass Founders	Borough Foundry, Pontefract Road	Barnsley ...	... ..	24
New Found Cycle Components Co.	Cycle Fittings Manufacturers ..	Beatrice Road	Leicester ...	Component, Leicester	349

Fewston's Electrical Works, Ltd.	Manufacturing Electrical Engineers	Tool Makers Engineers and Ironfounders	Herbert Street Road.	Taunton	Arc, Taunton	9 Nat.
Joble & Lund	Tool Makers	Engineers and Ironfounders	Northern Machine Tool Works Phillip Street, Victoria Dock Road	Felling-on-Tyne London, E. ...	Lathes, Felling-on-Tyne Normandy, London	11023
North-Eastern Marine Engineering Co., Ltd.	Marine Engine Builders, Boiler-makers Iron and Brass Founders Makers of Heavy Iron and Steel Forgings, etc. Marine Engine Builders, Boiler-makers, Iron and Brass Founders, and Makers of Heavy Iron and Steel Forgings	Northumberland Engine Works Northumberland Forge South Dock	Northumberland Engine Works Northumberland Forge South Dock	Wallsend-on-Tyne Wallsend-on-Tyne Sunderland ...	News, Wallsend News, Wallsend News, Sunderland	104 P.O. 105 P.O. 10 Nat. 37 Nat. 10 P.O. 12 P.O. 130 Nat.
Nottingham Engineering Co., Ltd.	Engineers, Millwrights and Tool Makers	Steel Forgings	Canterbury Rd., Radford	Nottingham ...	Iron, Nottingham	1578
Oldham, Alexander, & Sons	Engineers, Machinists and Piston Makers	Johnson Brook Piston Works	Dukinfield ...	Dukinfield ...	Weldless, Dukinfield	8 Hyde
Oldham Boiler Works Co., Ltd.	Boilermakers	Oldham Edge Iron Works	Oldham ...	Oldham ...	Boilers, Oldham ...	16
Oldham & Son	Engineers and Piston Makers	Steel Coil Piston Works, Denton	Near Manchester Leeds...	Near Manchester Leeds...	Coils, Denton ..	235
Oldroyd, Edwin, & Co., Ltd.	Heating, Ventilating, Hydraulic, Mechanical and Electrical Engineers	Crown Works	Leeds...	Leeds...	Calorifics, Leeds ...	241
Orient Steam Navigation Co., The	... ..	13 Fenchurch Avenue ...	London, E.C.	London, E.C.	Orient, London	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Osborn, Samuel, & Co.	Steel Manufacturers ...	Clyde Steel and Iron Works.	Sheffield	Osborn, Sheffield	409 and 2039
Owen, Brazil & Holborow	Steam Engine and Pump Makers	Vulcan Ironworks	Bristol	Hydraulic, Bristol	846
Oxley Brothers, Ltd.	Ironfounders and Engineers...	Mowbray Street	Sheffield	...	1087
Oxley, George, & Sons	Ironfounders and Engineers	Vulcan Foundry, Attercliffe Road	Sheffield	...	1200
Palmer's Shipbuilding and Iron Co., Ltd.	Shipbuilders and Engineers	...	Jarrow-on-Tyne	Palmers, Jarrow	148 P.O. 149 P.O. 2765 Nat.
Parker, Charles, Sons & Co.	Engineers, Machine Makers and Ironfounders	Victoria Foundry	Dundee	Parker, Dundee	34
Parker, Thomas, Ltd.	Electrical Engineers	Wednesfield Road	Wolverhampton	Coils, Wolverhampton	40 and 80
Parkinson, J.	Machine Tool Maker	Canal Ironworks	ShIPLEY	Temples, Shipley	1618 Nat.
Parsons, C. A., & Co.	Electrical Engineers, Electric Lighting Plant, Electric Motors and Steam Turbine Makers	Heaton Works	Newcastle-on-Tyne	Turbo, Newcastle-on-Tyne	2 Byker G.P.O.
Payne & Sons	Printers' Engineers	Atlas Works	Otley	Wharfedale, Otley	1021
Pearn, Frank, & Co., Ltd.	Hydraulic Engineers and Steam Pump Makers	Thomas Street, West Gorton	Manchester	Pumps, Manchester	103
Pearson & Bennion, Ltd.	Engineers and Machinists	Union Works, Belgrave Road	Leicester	Prominent, Leicester	123 398 398A
Pease, Rhodes & Co., Ltd.	Engineers, Brassfounders and Copper-smiths	Offices, Showrooms, and Brass Works—19 Little Horton Lane	Bradford	Stanchion, Bradford	
		Iron Works—Thornton Road			
		Heath's Yard			

Pegg, Samuel, & Son	Engineers and Ironfounders	...	Alexander Street...	...	Leicester	...	Pegg, Ironfounder	...	104
Pemberton & Co.	Loom Makers	...	Waterloo Iron Works, Trafalgar Street	...	Burnley	...	Pembertons, Machinists	...	113
Penn, John, & Son, Ltd.	Engineers	...	Greenwich	...	London, S.E.	...		...
Perkin & Co., Ltd.	Engineers	...	Junction Engine Works, Whitehall Road	...	Leeds	...	Shafting, Leeds	...	231
Petrie, John, Jun., Ltd.	Wool Washing and Drying Machines, General Repair Work, Ironfounders, etc.	...	River Street Ironworks	...	Rochdale	...	Petrie, Jun., Rochdale	...	37A
Phoenix Dynamo Manufacturing Co.	Electrical Engineers	...	Hubert Street, Leeds Road.	...	Bradford	...	Dynamo, Bradford	...	952
Phosphor Bronze Co., Ltd.	Brassfounders, Makers of Metallic Alloys & Metal Rollers and Drawers	...	87 Summer Street	...	London, S.E.	...	Phosphor Bronze, London	...	4557 Hop.
Pickerings, Ltd.	Lift, Crane and Elevator Builders, Hydraulic and General Engineers	...	Globe Elevator Works	...	Stockton-on- Tees	...	Pickerings, Stockton- on-Tees	...	4544 Nat.
Pickup & Kelly	Ironfounders, Engineers and Paper Stainers' Machinists	...	Atlas Road Foundry	...	Darwen	...		...
Pilling, John, & Sons, Ltd.	Loom Makers, Iron & Brass Founders	...	Primet Foundry	...	Colne	...	Pillingsons, Colne	...	
Platt Brothers & Co., Ltd.	Makers of Textile Machinery	...	Hartford Works	...	Oldham	...	Platts, Oldham	...	26
Pool, L., & Son	Bolt, Nut and Screw Manufacturers	...	Lion Screw & Bolt Works, Sweet Street	...	Leeds	...	...	...	501
Pope, W., & Son, Ltd.	Gas and General Engineers	...	Broad Street House	...	London, E.C.	...	Irradiating, London	...	299 Avenue
Potter, W. H., & Sons	Shipbuilders and Engineers	...	Gotha Works	...	Slough	...	Gotha, Slough	...	7 Slough
Pratt, F., & Co., Ltd.	Machine Tool Makers	...	Queen's Dock	...	Liverpool	...	Seahorse, Liverpool	...	1102
Prince Smith & Son	(See Smith, Prince, & Son)	...	Eagle Ironworks, Victoria Street, East	...	Halifax	...	Pratt, Halifax	...	161
Proctor, Jonas	Roller, Ring, Spindle and Flyer and Tool Maker	...	Moses Gate Machine Works	...	Near Bolton	...	Spindles, Bolton	...	421
Pullan & Mann	Brick, Tile and Sanitary Machinery Engineers, etc.	...	Elland Road	...	Leeds	...	Cambrian, Leeds	...	1232

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Pulsometer Engineering Co., The, Ltd.	Pump and Refrigerating Machinery Makers	9 Elms Ironworks, Hayle Foundry Wharf 61 & 63 Queen Victoria St. Leeds 1 East Parade ... 76 Oldhall Street... 8 York Street ...	London, S.W. London, E.C. Leeds Liverpool Glasgow	Pulsometer, London Pulsometer, Leeds Pulsometer, Liverpool Pulsometer, Glasgow	872 Bank 1925 228 5219
Qualter, Hall & Co. ...	Engineers and Ironfounders	Railway Foundry ...	Barnsley ...	Qualter Hall, Barnsley	17 Nat.
Rait & Gardiner ...	Engineers and Ship Repairers	Offices—155 Fenchurch Street Works—Private Dry Docks and Works at Millwall Docks, and at Cubitt Town Works, adjoining Dry Docks at Royal Albert Docks and Tilbury Docks Faraday Road, Lenton ...	London, E.C.	Repairs, London	4091 Avenue
Raleigh Cycle Co., Ltd. ...	Cycle Manufacturers ...	West Pier Docks... Market Street Works ... 36 Percival Street, Goswell Road Eagle Foundry ...	Nottingham ... Leith ... Keighley ... London, E.C.	Raleigh, Nottingham Ramage, Leith Ramsden Brothers, Keighley	232 548 7239
Ramage & Ferguson, Ltd. ...	Engineers and Shipbuilders	Worsted Machine Makers ...	Greenock ...	Eagle, Greenock	8
Ramsden Brothers ...	Worsted Machine Makers ...	Wortley ...	Leeds	...	985
Ranger & Hooper ...	Brassfounders ...	...	...	...	...
Rankin & Blackmore ...	Marine Engineers, Ironfounders, and Boilermakers	...	...	...	...
Ratcliff, J., & Sons ...	Machinists, Iron and Brass Founders	...	...	...	...

MANUFACTURERS	MARKETS	Road	Leeds
Co., Ltd.)			
Readhead, John, & Sons	Marine Engineers, Shipbuilders, Engine, Boiler, Ship Repairers and Dry Dock Proprietors	West Docks	South Shields
Read Holliday & Sons, Ltd.	(See Holliday, Read, & Sons, Ltd.)		
Reay & Usher	Forge Masters	South Hylton	Sunderland
Redman, C., & Sons	Machine Tool Makers	Parkinson Lane	Halifax
Redpath & Paris	Engineers and Boiler makers, etc.	LeaCut Ironworks, Church Row, Limehouse	London, E.
Reid, Thomas, & Sons	Millwrights, Engineers, Steam Steering Gear, Windlass and Capstan Makers	Thread Street	Paisley
Remington, T. W., & Co.	Brassfounders and Finishers	19 and 20 Tower Street, Waterloo Road	London, S.E.
Rennie, G., & Co.	Engineers and Shipbuilders	Thames Street, Greenwich	London, S.E.
Rennoldson, J. P., & Sons	Marine Engineers and Shipbuilders	Wapping Street and Shadowell Street	South Shields
Reynolds, James, & Co.	Textile Machine Makers, Millwrights and Engineers	Linfield Foundry, Grosvenor Street	Belfast
Rhodes, J., & Sons	Machine Makers	Grove Ironworks	Wakefield
Rice & Co.	Hydraulic Engineers	Neville Works, Elland Road	Leeds
Richardson, Thomas, & Sons, Ltd.	Marine and Electrical Engineers	Hartlepool Engine Works	Hartlepool
Richardson, Tuer & Co.	Ironfounders and Cotton Machinists	Hope Foundry, Farnworth	Manchester
Richardson, Wigham, & Co.	Engine, Boiler and Shipbuilders	Neptune Works, Walker	Nr. Newcastle-on-Tyne
Richards, W., & Son	Constructional Ironwork and Founders	Phoenix Ironworks	Leicester
Richmond & Chandler, Ltd.	Agricultural Engineers	Strangeways	Manchester

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Richmond, Joseph, & Co., Ltd.	Engineers	30 Kirby Street, Hatton Garden	London, E. C.	Richmond, London	822 Holborn
Rey, J. F.	Engineer, Millwright and Machine Maker	Marino Mills, Moldgreen	Huddersfield	... ..	284
Rey, J. H., & Co.	Engineers, Bleaching, Dyeing and Finishing Plant Makers	Elton Ironworks	Bury	Riley Bury	59
Ritchie, Hart & Co., Ltd.	Engineers, Iron and Brass Founders	Mountpottinger Road	Belfast	Ritchie Hart, Belfast	145
Robertson, A. W., & Co.	Engineers, Shipbuilders and Ship Repairers	Royal Albert Dry Dock, Albert Docks	London, E.	Trunnion, London	538 Albert Dock
Robertson & Orchar, Ltd.	Engineers, Millwrights, Machine Makers and Founders	Wallace Foundry	Dundee	Founders, Dundee	398
Robin Hood Cycle Co., Ltd.	Cycle Manufacturers	Newdigate Street	Nottingham	Enterprise, Nottingham	126
Robinson & Dodd	Engineers	Bridge Road Works, Garford Street, Poplar	London, E.	Ferrarius, London	5063 Eastern
Robinson, J. H.	Brassfounder	91 Globe Road	London, E.	...	...
Robinson, Joseph, & Co.	Engineers, Ironfounders and Machinists	Springfield Ironworks, Salford	Manchester	Opal, Manchester	783
Robinson, William, & Son	Machinists	High Lee Mill	Oldham	Machinery, Oldham	198
Rodger, A., & Co.	Shipbuilders and Ship Repairers	Dock Shipbuilding Yard	Port-Glasgow	Rodger, Port-Glasgow	7
Rodger Bolton & Son	(See Bolton, Rodger, & Son.)	...	...	...	...
Rodger, R., & Co.	Engineers, Iron and Brass Founders, Coppersmiths, Makers of Steam Winches, Cranes, etc.	Stockton Iron Foundry, West Row	Stockton-on-Tees	Rodger, Stockton-on-Tees	19 P.O. 4506 Nat.
Rodger, John, & Co., Ltd.	Steel Founders, Forgemasters and Engineers	Stanners Closes Steel Works	Wolsingham, R.S.O., (Co. Durham)	Steelworks, Wolsingham	58 Nat.
Robt. Downs & Thompson, Ltd.	Engineers and Boilermakers	Old Foundry	Hull	Rose, Hull	344
Robt. & Appleby	Electrical Engineers	Trafalgar Street	Bradford	Magneto, Bradford	844

Rowan, David, & Son	...	Marine Engineers and Boilermakers	231 Elliot Street ...	Glasgow ...	Rowan, Glasgow ...	1316
Royce, F. H., & Co., Ltd.	...	Manufacturing Electricians ...	Cooke Street, Hulme ...	Manchester ...	Switch, Manchester	772 and 3562
Russell & Co. ...	...	Shipbuilders and Steel Spar Makers	Kingsston Shipbuilding Yard	Port-Glasgow	Russell, Port-Glasgow	3335 Glasgow Port-Glasgow
Russell, George, & Co.	...	Engineers and Cranemakers	Alpha Works ...	Motherwell ...	Russell, Motherwell	4
Russell, S., & Sons ...	...	Ironfounders ...	Bath Foundry, Bath Lane	Leicester	...	115
Ryder, Thomas, & Son	...	Forging Machines, Engineers' Tool Makers, Roller Makers for Cotton Machinery, etc.	Turner Bridge Ironworks, Tonge	Bolton	Ryder, Machinists, Tonge, Bolton	206
Ryder, T., & Co.	...	Brewers' Engineers, Copper-smiths, etc.	Knott Mill	Manchester ...	Lecomber, Manchester	1789
Ryder, William	...	Machinist, Tool Maker, Roller Maker, Spindle and Flyer Maker, Ring and Spindle Maker for Cotton Machinery	Bee Hive Works, Folds Road	Bolton	Beehive, Bolton	55
St. George's Ironworks, Ltd.	...	Engineers, Ironfounders, Millwrights, Wheel and Pulley Makers	Hulme Hall Road	Manchester ...	Ormerod Grierson, Manchester	229
St. Pancras Ironworks Co., Ltd.	...	Engineers, Ironfounders and Contractors	171, 173 St. Pancras Road	London, N.W.	Equitation, London	519 King's Cross
Sagar, J., & Co.	...	Wood Working Machinery Manufacturers, Saw Mill Machinery Makers	Canal Works ...	Halifax	Sawtooth, Halifax ...	136
Sawyer, W., & Son ...	...	Brassfounders ...	51 to 53 Mount Pleasant, Clerkenwell	London, E.C.	...	...
Saxon, George ...	...	Engineer and Millwright	Openshaw Engineering Works	Manchester ...	Saxons, Openshaw ...	959
Schofield & Taylor	...	Engineers and Millwrights	Perseverance Ironworks, Turnbridge	Huddersfield	...	120
Scholefield, R. ...	...	Brick Machine Maker	Kirkstall Road ...	Leeds	Brick, Leeds	...
Scott Brothers ...	...	Machine Tool Makers	West Mount Ironworks ...	Halifax	Scott, Halifax	116

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Scott & Co.	Shipbuilders and Engineers ...	Cartsdyke	Greenock ...	Scott, Greenock ...	113
Scott, Ernest, & Mountain, Ltd.	Electrical and General Engineers, Iron and Brass Founders	Close Works	Newcastle-on-Tyne	Esco, Newcastle-on-Tyne	432 P.O. 1259 Nat.
Scott & Hodgson	Engineers	Guide Bridge Ironworks, Guide Bridge	Near Manchester	Engines, Hooley Hill	67
Scott, John, & Co.	Engineers and Shipbuilders ...	Abden Works	Kinghorn ..	Scott, Kinghorn ...	855
Scriven & Co.	Machine Tool Makers	Leeds Old Foundry, Marsh Lane	Leeds ...	Scriven, Leeds ...	1819
Seager, L. J. & C.	Engineers, Iron and Brass Founders	Overy Street Ironworks	Dartford ...	Seager, Engineer, Dartford	
Shanks, Alexander, & Son, Ltd.	Engineers	Dens Ironworks Bush Lane House, Bush Lane, Cannon Street	Arbroath, N.B. London, E.C.	Shanks, Arbroath Shankson, London	
Shanks, Thomas, & Co. ...	Engineers and Tool Makers ...	Union Ironworks ...	Johnstone ...	Shanks, Johnstone ...	5
Sharp, Stewart & Co., Ltd.	Locomotive Engine Builders and Tool Makers	Atlas Works, Springburn	Glasgow ...	Loco, Glasgow ...	3210
Sharples, William, & Co. ...	Engineers, etc.	Irwell Foundry	Ramsbottom	Sharples, Engineers, Ramsbottom	117
Saw, Mark	Engineer, Millwright and Iron-founder	Milnsbridge Ironworks, Pollard St., Milnsbridge	Huddersfield	... ..	31 Milns-bridge
Shepherd, Hill & Co., Ltd.	Machine Tool Manufacturers, Brick, Tile and Stone Machinery Makers	Union Foundry, Hurdley	Leeds ...	Shepherd Hill, Leeds	1307
Shoard, W.	General Ironfounder, Statue and Fine Art Caster	Great Hall Street ...	London, E.C.		
Sorrocock, J. & R.	Ironfounders	Lee Foundry	Darwen ...	Vulcan, Darwen ...	10
Slebe, Gorman & Co.	Submarine Engineers and Manufacturers of Diving Apparatus	187 Westminster Bridge Road	London, S.E.	Slebe, London ...	251 Hop.
Siemens Brothers & Co., Ltd.	Telegraphic and Electrical Engineers and Contractors	12 Queen Anne's Gate, Westminster 15 Victoria Buildings, Currier Street, West 61 North George Street	London, S.W. Newcastle-on-Tyne Glasgow	Siemens, London Siemens, Newcastle-on-Tyne	3999 West- minister 1715

Simpson, James, & Co., Ltd.	Builders	Hydraulic and General Engineers, and Makers of Pumps	101 Grosvenor Road, Pimlico	London, S.W.	Aquosity, London, S.W.	316 Westminster
Simpson's Lever Chain and Cycle Co.		Manufacturers of Cycles and the Simpson Lever Chain	Draycott	Derbyshire ...	Chain, Draycott, Derby	1629
Sinclair, George	Boilermaker and Engineer	...	Albion Boilerworks	Leith ...	Sinclair, Leith	537
Smith, A. & D., & Co.	Marine Engineers, Millwrights, Shipsmiths and Ship Repairers	...	Pier Engine Works, Thames Place, Line-house Hole Park	London, E.	Smiths, Limehouse Pier	
Smith Brothers & Co.	Boilermakers	...	Gresley Ironworks, Ordsal Lane, Salford	Manchester	Gresley, Manchester	564
Smith & Coventry, Ltd.	Engineers, Patentees and Manufacturers of Labour-Saving Machine Tools	...	Castle Ironworks, Raglan Street	Wolverhampton	Presses, Wolverhampton	7210
Smith, Daniel, & Co. ...	Presses, Stamps, Shears and Metal Working Machinery (<i>See Ford-Smith, F.</i>)	...	Paragon Ironworks, South Parade	Halifax	Radial, Halifax	
Smith, G. F. ...	Engineers' Tool Maker	...	Possil Engine Works, Possilpark	Glasgow	Possil, Glasgow	3666
Smith, Hugh, & Co. ...	Machine Tools for Shipbuilders and Boilermakers	...	Crane Works	Keighley		
Smith, John	Engineer and Millwright, Maker of Stone Sawing Machinery, Cranes, etc.	...	Burlington Shed	Keighley	Prince, Keighley	4
Smith, Prince, & Son	Worsted Machinery Makers	...	Rodley	Leeds	Smith, Rodley	18 Stanningley
Smith, Thomas	Engineer and Cranemaker	...	Sun Ironworks	Heywood	Smiths, Heywood	1102 Nat.
Smith, William, & Brothers, Ltd.	Loom Makers	...	Royal Exchange and Friday. (Tuesday and Friday.)	Manchester O. & P. Pillars)		
Southgate Engineering Co., Ltd., The	Crane, Machine Tool and Ordnance Machinery Makers	...	New Southgate	Near London	Centrifugal, New Southgate	
Spencer, James, & Co.	Machine Tool, Crane and Weighing Machine Makers	...	Chamber Ironworks, Hollinwood	Manchester	A.B.C. Engineering Code used	207
Spencer, John, & Co.	Machine Tool Makers	...	Atlas Works, Pitt Street	Keighley	Spencer, Engineer, Keighley	118

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Spencer, John, & Sons, Ltd.	Steel Manufacturers ...	Cuseburn Forge ...	Newcastle-on-Tyne	Tyne, Newcastle-on-Tyne	1212 Nat. 464 P.O.
Spetch & Thomas ...	Gas Engineers ...	Newburn Steel Works ... West-End Mills, Longside Lane	Newburn Bradford		
Springfield Cycle Co., Ltd. ...	Cycle Manufacturers ...	Sandiacre ...	Nottingham ...	Valkyrie, Sandiacre...	1631
Standard Engineering Co., The	Engineers, Boot and Shoe Machinists	43 Welford Road	Leicester ...	Standard Engineers, Leicester	502
Standard Tool Co., The	Machine Tool Makers and Iron-founders	Mearclough ...	Sowerby Bridge		
Stead Brothers ...	Engineers, Millwrights, etc. ...	Hare Street, Gibbet Lane	Halifax ...	Stead Brothers, Halifax	305
Stell, Stephen ...	Tool Maker ...	Alkincote Works...	Keighley ...	Stell, Alkincote, Keighley	
Stephen Cotton & Co. ...	(See Cotton, Stephen, & Co.)				
Stephens, Smith & Co., Ltd.	Engineers and Electricians ...	Cuba Street, Millwall	London, E.	Reckenzaun, London	
Stephenson, R., & Co., Ltd.	Locomotive and Marine Engineers, and Iron Founders	South Street	Newcastle-on-Tyne	Rocket, Newcastle-on-Tyne	458 P.O. 1153 Nat. 57
Stevenson & Co., ...	Engineers and Boilermakers	Canal Foundry, Fylde Road	Preston ..	Propeller, or Stevenson, Preston	
Stewart, John, & Son, Ltd.	Engineers, Shipbuilders, Dry Dock Proprietors	22 Billiter Street ...	London, E.C.	Steamships, London	4428 Avenue
Stirk, John, & Sons ...	Tool Makers ...	Ovenden Road ...	Halifax ...	Stirk, Halifax ..	124
Stone, J., & Co. ...	Electrical Engineers, Bronze, Brass and Iron Founders, Manufacturers of Fire Appliances, Valves and Fittings for Water Supply, Boiler Fittings, Copper Nail, Rivet, Bolt and Nut Makers	Deptford...	London, S.E.	Stone, Deptford, London	2 Deptford
Storey, Isaac, & Sons ...	Brassfounders, Coppermiths and Engineers	Little Peter Street and Empress Street, Cornbrook	Manchester ...	Stork, Manchester ...	1477

Stothert & Pitt, Ltd. ...	Engineers ... ..	...	...	...	...	...	...	...	Stothert, Bath ...	39
Strang, Joseph, Ltd. ...	Ironfounders, Engineers, Calico Printers' and Bleachers' Machinists	...	Princes Foundry ...	...	...	...	...	Ramsbottom	Strang, Ramsbottom	109
Stubbs, Joseph ...	Machine Maker and Ironfounder ...	...	Mill Street Works, Ancoats Branch Works—Openshaw	...	...	...	...	Manchester	Winding, Manchester	440
Sudworth & Settle, Ltd. ...	Cycle Manufacturers and Cycle Fittings	...	Spinner Cycle Works	...	...	...	...	Nottingham	Fittings, Nottingham	5129 816
Summers & Scott ...	Engineers ... ..	...	High Orchard Ironworks	...	...	...	...	Gloucester	Summers, Gloucester	54
Sunderland Forge and Engineering Co., Ltd., The	Electrical and General Engineers and Forge Masters	...	Pallion ... ..	...	...	...	...	Sunderland	Marr, Sunderland	268 Nat.
Swan, C. S., & Hunter, Ltd. ...	Shipbuilders, Floating Graving Dock Builders and Ship Repairers	...	Wallsend	...	...	...	...	Newcastle-on-Tyne	Hunter, Wallsend	411 P.O. 2 Nat. Wallsend
Swift, George	Machine Tool Maker	...	Claremont Ironworks	...	...	...	...	Halifax	Swift Claremont, Halifax	
Sykes, Alfred	Electrical and Mechanical Engineer	...	Spring Place Mill, Springwood Street	...	...	...	...	Huddersfield	Light, Huddersfield	375 and 1579 Bradford 307
Sykes, John, & Sons, Ltd. ...	Machinists ... ..	...	Turnbridge Machine Works	...	...	...	...	Huddersfield	Ezra, Huddersfield	
Tate, James	Engineer ... ..	...	Harris Street	...	...	...	...	Bradford	Valve, Bradford	1402
Tatham, William, & Co. ...	Cotton Waste, Wadding, etc., Machinery Makers	...	Vulcan Works	...	...	...	...	Rochdale	Tatham Company, Rochdale	144
Taylor & Hubbard ...	Engineers and Cranemakers	...	Kent Street Works	...	...	...	...	Leicester	Lifting, Leicester	575
Taylor, Lang & Co., Ltd. ...	Textile Machinists ... ..	...	Castle Ironworks	...	...	...	...	Stalybridge	Lang, Stalybridge	107
Taylor, Robert, & Sons ...	Steam Boilers and Boiler Fittings	...	Marsden Ironworks	...	...	...	...	Huddersfield	Robert Taylor, Marsden	3 Marsden
Taylor, Thomas ...	Engineer and Machinist	...	Gladstone Street	...	...	...	...	Leicester	... ..	86
Taylor, Wordsworth & Co. ...	Machinists ... ..	...	167 Water Lane	...	...	...	...	Leeds	Wordsworth, Leeds	540

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Thompson, J. W.	Ironfounder	Bridge Foundry	Sunderland ...	Thompson Foundry, Sunderland	154 Nat.
Thomson, Son & Co. ...	Engineers, Millwrights, Machine Makers and Founders	Douglas Foundry	Dundee ...	Turbine, Dundee ...	402
Thornycroft, John I., & Co.	Marine and General Engineers, Shipbuilders and Boilermakers	Church Wharf, Chiswick	London, W...	Thornycroft, London	6 Hammer-smith
Thornton & Crebbin ...	Ironfounders and Engineers	Hammerton Street ...	Bradford ...	Ironfounders, Bradford	226
Thwaites Brothers, Ltd.	Engineers	Vulcan Iron Works, Thornton Road	Bradford ...	Thwaites, Bradford	325
Tinker, Shenton & Co., Ltd.	Boilermakers	Hyde Boiler Works ...	Hyde, Cheshire	Duplex, Hyde ...	21
Tomlinson, G. W. ...	Machinist	Engine Bridge Works ...	Huddersfield	Tomlinson, Huddersfield	70
Tomlinson, James (Rochdale), Ltd.	Machinery Manufacturers ...	Soho Ironworks, Oldham Road	Rochdale ...	Tomlinson, Rochdale	54
Tonkinson, H., & Sons ...	Ironfounders, Plumbers and Smiths	Boro' Road Foundry, Borough Road	Sunderland ...	... ..	127 Nat.
Trent Cycle Co., Ltd., The ...	Cycle Manufacturers	Long Eaton	Nottingham	Cycle, Long Eaton ...	1624
Turnbull, Alexander, & Co. ...	Valve and Steam Trap Makers	St. Mungo Works, Bishopbriggs,	Glasgow ...	Valve, Bishopbriggs	4394
Turner & Co.	Engineers	1 George Street, Lisson Grove	London, N.W.	Tension, London	
Turton, George, Platts & Co.	Engineers' Manufacturers ...	Savile Street	Sheffield ...	Butler, Sheffield ...	1370
Umpherston & Co., Ltd. ...	Engineers and Millwrights ...	Bowershall Engine Works, Bonnington Road	Leith ...	Umpherston, Leith	
Unbreakable Pulley and Mill-gearing Co., Ltd., The	Engineers and Millwrights ...	Hyde Road Engineering Works, West Gorton	Manchester ...	Strength, Manchester	52 Nat.
Urmson & Thompson ...	Engineers and Millwrights	56 Canon Street	London, E.C.	Horsepower, London	5051 Bank

Utley, Thomas, & Co.	... Engineers, Ship Ventilator and Pivoted Sidelight Manufacturers	Works, Silverdale Avenue, Tuebrook	Liverpool	... ... ... ... ...	109 Old Swa
Vaughan & Son	... Overhead Electric Travelling Crane- makers	Royal Iron Works, West Gorton	Manchester	Vaunting, Manchester	5106
Vauxhall Ironworks Co., Ltd., The	Co., Marine Engineers and Steam Pump Makers	Wandsworth Road ... City Office — 45 Leaden- hall Street	London, S.W. London, E.C.	Wellhole, London	274 Hop 800 Avenue
Vickers, Sons & Maxim, Ltd.	Steel Manufacturers, Gun Makers, etc.	River Don Works, Bright- side	Sheffield	Vickers, Sheffield	308, 1845, Nat. 5 P.O.
	Shipbuilders and Marine Engineers	Naval Construction Works	Barrow-in- Furness	Vickers, Barrow-in- Furness	14 Nat. 1 P.O.
	Makers of Ordnance ...	28 and 32 Victoria Street	London, S.W.	Vickers, London	3214 West- minster
	Gun Makers, etc.	Erith Ordnance Works	Erith	Maxim, Erith	
	Gun Makers, etc.	Dartford Works	Dartford	Maxim, Dartford	
Victor Coates & Co., Ltd.	(See Coates, Victor, & Co., Ltd.)				
Victor Cycle Co., Ltd. (John Jardine)	Cycle Manufacturers ...	Harley Street, Lenton & Deering Street	Nottingham	Vanquisier, Nottingham	815 295
Wade, Josiah, Ltd.	Printing Machine Maker	Crown Works, Hopwood Lane	Halifax	Halifax Wade,	42
	Printing Machine Makers and Printers' Furnishers	10 College Lane	Liverpool	Impression, Liverpool	5181
Wailles, George, & Co.	Lathe Chuck Makers Engineers, Millwrights, Iron and Brass Founders	Hope Works ... 258 Euston Road	Halifax London, N.W.	Wade, Halifax	42
Wainwright, Thomas, & Sons	Engineers, Millwrights, Brass and Iron Founders	Commercial Ironworks	Stalybridge	Wainwright, Stalybridge	128
Walker Brothers	Engineers and Ironfounders, Makers of Iron and Steel Forgings	Pagefield Ironworks	Wigan	Pagefield, Wigan	14

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Walker, Eaton & Co.	Engineers and Ironfounders	Wicker Ironworks	Sheffield	Founder, Sheffield ...	373
Walker, James, & Son	Engineers and Millwrights	Caledonian Engine Works, Dundee Street, West Fountainbridge	Edinburgh	Fountain, Edinburgh	86 West
Walker Samuel	Engineer, Machinist and Ironfounder	Eagle Works, Radcliffe	Near Manchester	Walker, Radcliffe	
Waller, George, & Co.	Engineers and Founders	Phoenix Ironworks	Stroud	Waller, Bowbridge	
Wallis Brothers	Ironfounders	165 Queen Victoria Street Ayres Quay	London, E.C. Sunderland	Weighbeam, London	277 Nat.
Wallsend Slipway and Engineering Co., Ltd., The	Marine Engine Builders, Ship Repairers and Dry Dock Owners	Wallsend	Newcastle-on-Tyne	Wall, Newcastle-on-Tyne	412 P.O. 11507 Nat. 11926 Nat.
Walmsley, Charles, & Co., Ltd.	Engineers and Ironfounders	Atlas Works, Elton	Bury	Pumps, Bury	64
Ward & Haggas	Engine and Machine Tool Makers	Eastwood Tool Works	Keighley	...	154 Nat.
Ward & Witham	Cycle Makers	Lees Road	Oldham	...	341
Waterston, H. J., & Co.	Ironfounders and Electro Galvanisers	Paley Street	Sunderland	...	74 Nat.
Watson, Henry, & Sons	Engineers	High Bridge Works, Walkergate	Newcastle-on-Tyne	Watsons, Newcastle-on-Tyne	517 Nat. 433 P.O.
Waygood, R., & Co., Ltd.	Electric, Hydraulic, Gas and Steam Engineers	Falmouth Road, Great Dover Street	London, S.E.	Waygood, London...	760 Hop. 440 West-mins
Wearmouth Foundry Co., Ltd., The	Ironfounders, Brassfounders, Brass-finishers and Copper-smiths	Monk Street	Sunderland	...	440 Nat.
Webb, R. W., Ltd.	Cycle Component Manufacturers	Draycott	Near Derby	Tyre, Draycott	1632 Notts
Weir, G. & J., Ltd.	Engineers	Holm Foundry, Cathcart	Glasgow	Giweir, Glasgow	3223
Wells, Jonas	Brassfounder and Brass Finisher, Malleable Iron and Steel Founder	Greengate Works	Keighley	Jonas Wells, Keighley	7233
West End Engine Works Co.	Paper Machine Manufacturers	170 Dundee Street	Edinburgh	West End, Edinburgh	770

West, John	... ..	and Gas Works Plant Gun Metal, Copper / and Brass Founder	157 and 159 Back Church Lane, Commercial Road Borough Foundry, Temple Town	London, E. ...	Jumpwell, London	7 Nat.
Wheatley & Taylor	... ..	Ironfounders	Canal Engineering Works	South Shields	Castings, South Shields	966
Whitaker, C., & Co.	... ..	Engineers and Millwrights	Sun Ironworks	Bradford	... ..	966
Whittaker, William, & Sons	... ..	Engineers	Laigh Park Engine and Machine Works	Oldham	... ..	83
White, Thomas, & Sons	... ..	Engineers, Machinists and Tool Makers	Red Scar Spring Works	Paisley	White, Paisley	138
White, W. B.	... ..	Machinist, Iron and Brass Founder, Loom Maker, Spring Maker, etc.	Dock Street	Colne...	White, Colne	13
Whiteley's Acme Cycle Co., Ltd.	... ..	Cycle Manufacturers	Showroom—Guildford Street	Leeds...	Whiteley's Wheeleries, Leeds	925 925A
Whiteley, William, & Sons, Ltd.	... ..	Woollen Machinists	Prospect Ironworks, Lockwood	Huddersfield	Whiteley, Lockwood	98
Whitley Partners	... ..	Engineers, Iron and Brass Founders	Railway Works	Leeds...	Torpedo, Leeds	1144
Widdowson, J. H.	... ..	Screwing Tackle Manufacturer	Britannia Works, Ordsal Lane, Salford	Manchester ...	Taps, Salford,	
Wigham Richardson & Co.	... ..	(See <i>Richardson, Wigham, & Co.</i>)	Bradford Road Tool Works	Keighley	Wilkinsons, Engineers Keighley	
Wilkinson, G., & Sons	... ..	Engineers, Machine Tool Makers, Iron & Brass Founders' Machinists	Tottenham Mews ...	London, W.	Rapid, London	
Wilkinson, P., & Sons	... ..	Brass and Gun Metal Founders ...	Holme House Foundry, Swinley Lane	Wigan	... ..
Wilkinson, William, & Co., Ltd.	... ..	Engineers and Ironfounders	Green Lane	Sheffield	Williams, Sheffield...	421
Williams Brothers	... ..	Brassfounders, etc.	Royds Works	Sheffield	Winders, Sheffield ...	15
Wilson Hartnell	... ..	(See <i>Hartnell, Wilson.</i>)	Barley Brook Foundry ..	Wigan	Haulage, Wigan ...	55
Winder Brothers, Ltd.	... ..	Engineers and Ironfounders				
Wood & Gee	... ..	Engineers and Ironfounders...				

NAME	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Woods, Hamilton, & Co Ltd.	Engineers and Ironfounders...	South Hall Street, Ordsall Lane, Salford.	Manchester	Sluice, Manchester	1962 Nat.
Wood, J. & E. ...	Iron and Brass Founders, Engineers and Millwrights; Makers of Corliss Engines	Victoria Foundry, Garside Street	Bolton	Woods, Bolton	45
Woodhouse & Rixson	Bent Crank and Steel Forging Manufacturers	Chantry Steel and Crank Works, Bessemer Rd., Attercliffe	Sheffield	Rixon, Sheffield	1113
Workman, Clark & Co., Ltd.	Shipbuilders, Engineers and Boiler-makers	Spencer Basin ...	Belfast	Spencer, Belfast	56, 66, 488
Worsley Mesnes Iron Works Co.	Engineers and Ironfounders...	Worsley Mesnes Iron Works	Wigan	Engines, Wigan	46
Worth, Mackenzie & Co., Ltd.	Engineers, Iron and Brass Founders, Copper-smiths and Brass-finishers	Phoenix Works ...	Stockton-on-Tees	Worth Mackenzie	49 Nat.
Wren, Henry, & Co. ...	Engineers, Millwrights and Machine Makers	London Road Ironworks	Manchester	Wrens, Manchester	
Wright, B. & D. ...	Engineers and Millwrights ...	Oxford Works, Meadow Road	Leeds	Excel, Leeds	443
Yarrow & Co., Ltd. ...	Marine Engineers, Shipbuilders and Water Tube Boiler-makers	Isle of Dogs, Poplar	London, E.	Yarrow, London	114 Eastern
Yates & Thom ...	Engineers, Millwrights and Boiler-makers	Canal Foundry and Victoria Foundry	Blackburn	Yates, Blackburn	43 Nat.

SECTION II.

ARRANGED UNDER THE RESPECTIVE TRADE HEADINGS.

NAME	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Woods, Hamilton, & Co Ltd.	Engineers and Ironfounders...	South Hall Street, Ordsall Lane, Salford.	Manchester	Sluice, Manchester	1962 Nat.
Wood, J. & E. ...	Iron and Brass Founders, Engineers and Millwrights; Makers of Corliss Engines	Victoria Foundry, Garside Street	Bolton	Woods, Bolton	45
Woodhouse & Rixson	Bent Crank and Steel Forging Manufacturers	Chantry Steel and Crank Works, Bessemer Rd., Attercliffe	Sheffield	Rixon, Sheffield	1113
Workman, Clark & Co., Ltd.	Shipbuilders, Engineers and Boiler-makers	Spencer Basin ...	Belfast	Spencer, Belfast	56, 66, 488
Worsley Mesnes Iron Works Co.	Engineers and Ironfounders...	Worsley Mesnes Iron Works	Wigan	Engines, Wigan	46
Worth, Mackenzie & Co., Ltd.	Engineers, Iron and Brass Founders, Copper-smiths and Brass-finishers	Phoenix Works ...	Stockton-on-Tees	Worth Mackenzie	49 Nat.
Wren, Henry, & Co. ...	Engineers, Millwrights and Machine Makers	London Road Ironworks	Manchester	Wrens, Manchester	
Wright, B. & D. ...	Engineers and Millwrights ...	Oxford Works, Meadow Road	Leeds	Excel, Leeds	443
Yarrow & Co., Ltd. ...	Marine Engineers, Shipbuilders and Water Tube Boiler-makers	Isle of Dogs, Poplar	London, E.	Yarrow, London	114 Eastern
Yates & Thom ...	Engineers, Millwrights and Boiler-makers	Canal Foundry and Victoria Foundry	Blackburn	Yates, Blackburn	43 Nat.

SECTION II.

ARRANGED UNDER THE RESPECTIVE TRADE HEADINGS.



ENGINEERING EMPLOYERS FEDERATION UNDER THEIR RESPECTIVE TRADES.

Acetyline Gas Plant—

Ashmore, Benson, Pease & Co., Ltd.,
Stockton-on-Tees.
Fraser & Chalmers, Ltd., London.
Holliday, Read, & Sons, Ltd., Hud-
dersfield.
Pope, W., & Son, Ltd., London.

Agricultural Machinery and Implements—

Crowley, John, & Co., Ltd., Sheffield.
Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
M'Laren, J. & H., Leeds.
Mann & Charlesworth, Leeds.
Marshall, Sons & Co., Ltd., Gains-
borough.
Richmond & Chandler, Ltd., Man-
chester.

Air Compressors—

Abbot, John, & Co., Ltd., Gateshead-
on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Arrol, Sir William, & Co., Ltd.,
Glasgow.
Ashton, Frost & Co., Ltd., Blackburn.
Barraclough, Joseph, & Sons, Barnsley.
Beeley, Thomas, Hyde.
Bradley, R., & Co., Wakefield.
Campbell & Calderwood, Paisley.
Carrick & Wardale, Gateshead-on-
Tyne.
Carruthers, J. H., & Co., Glasgow.
Clayton, Goodfellow & Co., Ltd.,
Blackburn.
Clayton, Howlett & Co., London.
Craig, A. F., & Co., Ltd., Paisley.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Douglas Forge Co., Ltd., Wigan.

Air Compressors—*continued.*

Drysdale & Co., Glasgow.
Easton, Anderson & Goolden, Ltd.,
Erith.
Evans, Joseph, & Sons, Wolverhampton.
Fawcett, Preston & Co., Ltd., Liver-
pool.
Foster, Joseph, & Sons, Preston.
Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd.,
Paisley.
Galloways, Ltd., Manchester.
Goodwin, Arnold, & Son, London.
Greenock Foundry Co., Greenock.
Hanna, Donald & Wilson, Paisley.
Heald, John, Chorley.
Henderson, John M., Aberdeen.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.
Kenworthy, Taylor & Co., Barnsley.
Kerr, Stuart & Co., Stoke-on-Trent.
Larmuth, Thomas, & Co., Manchester.
Lees, Anderson & Co., Glasgow.
Manlove, Alliott & Co., Ltd., Not-
tingham.
Mather, Alex., & Son, Edinburgh.
Meldrum Brothers, Manchester.
Milne, James, & Son, Ltd., Edinburgh.
Nasmyth, Wilson & Co., Ltd., Man-
chester.
Needham Brothers & Brown, Barns-
ley.
Pearn, Frank, & Co., Ltd., Man-
chester.
Pope, W., & Son, Ltd., London.
Qualter, Hall & Co., Barnsley.
Ross, R. G., & Son, Glasgow.
St. George's Ironworks, Ltd., Man-
chester.
Sharples, William, & Co., Rams-
bottom.
Stevenson & Co., Ltd., Preston.

Air Compressors—continued.

Strang, Joseph, Ltd., Ramsbottom.
 Thwaites Brothers, Ltd., Bradford.
 Umpherston & Co., Ltd., Leith.
 Vauxhall Ironworks Co., Ltd., London.
 Wailes, George, & Co., London.
 Walker Brothers, Wigan.
 West End Engine Works Co., Edinburgh.
 West's Gas Improvement Co., Ltd., Manchester.
 White, Thomas, & Sons, Paisley.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Goe, Wigan.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Air Condensers—

(See Condensing and Cooling Plant.)

Air Propellers—

(See Fans and Blowers.)

Air Pumps—

(See Pumps and Pumping Engines ;
 also Air Compressors.)

Alloys—

(See Metals—Special.)

Aluminium Founders—

Billington & Newton, Longport.
 Bowen & Co., London.
 Fletcher Brothers, Ashton-under-Lyne.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ranger & Hooper, London.

Ammunition Machinery—

(See Cartridge-Making Machinery ;
 Explosives Machinery.)

Anchor—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.

Annealing Furnaces—

(See Furnaces.)

Anti-Friction Metals—

(See Metals—Special.)

Are Lamps—

(See also Electric Light Fittings.)

Crompton & Co., Ltd., London and Chelmsford.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 General Electric Co., Ltd., Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Royce, F. H., & Co., Ltd., Manchester.
 Siemens Brothers & Co., Ltd., London.

Armour Plates—

Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Vickers, Sons & Maxim, Ltd., Sheffield.

Asbestos-Working Plant—

Leach & Co., Rochdale.

Ash Hoists and Ejectors—

Alley & Maclellan, Glasgow.
Bailey, W. H., & Co., Ltd., Manchester.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Greenock Foundry Co., Greenock.
Mechan & Sons, Glasgow.
Shanks, Alex., & Son, Ltd., Arbroath.
Siemens Brothers & Co., Ltd., London.

Axles—

(See also **Railway Plant.**)

Allan, Edgar, & Co., Ltd., Sheffield.
Bolton Iron and Steel Co., Ltd., Bolton.
Brown, John, & Co., Ltd., Sheffield.
Cammell, Charles, & Co., Ltd., Sheffield.
Cravens, Ltd., Sheffield.
Darlington Forge Co., Ltd., Darlington.
Firth, Thomas, & Sons, Ltd., Sheffield.
Fox, Samuel, & Co., Sheffield.
Jessop, Wm., & Sons, Ltd., Sheffield.
Kirkstall Forge Co., Leeds.
Lancaster & Tonge, Ltd., Manchester.
Mather, Alex., & Son, Edinburgh.
Rogerson, John, & Co., Ltd., Wolsingham.
Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
Vickers, Sons & Maxim, Ltd., Sheffield.
Woodhouse & Rixson, Sheffield.

Baling Presses—

(See **Presses—Screw and Steam; also Hydraulic Presses.**)

Barges—

(See **Shipbuilders.**)

Barring Engines—

Adamson, Daniel, & Co., Dukinfield.
Ashton, Frost & Co., Ltd., Blackburn.
Buckley & Taylor, Oldham.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Foster, Joseph, & Sons, Preston.
Galloways, Ltd., Manchester.
Hick, Hargreaves & Co., Ltd., Bolton.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Milne, James, & Son, Ltd., Edinburgh.
Musgrave, John, & Son, Ltd., Bolton.
Saxon, George, Manchester.
Schofield & Taylor, Huddersfield.
Scott & Hodgson, Manchester.
Sharpley, William, & Co., Ramsbottom.
Walmsley, Charles, & Co., Ltd., Bury.
Wood, John and Edward, Bolton.
Yates & Thom, Blackburn.

Bars—Furnace—

(See **Fire Bars.**)

Bars—Iron and Steel—

(See **Steel and Iron Plates and Bars.**)

Batteries—Electric—

(See **Electric Batteries.**)

Beaming, Warping and Sizing Machinery—

(See also **Textile Machinery.**)

Blackburn Loom and Weaving Machinery Making Co., (William Dickinson & Sons), Ltd., Blackburn.
Butterworth & Dickinson, Burnley.
Bywater, William, Leeds.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Cliffe & Co., Huddersfield.
Dodd, Samuel, Oldham.
Hacking & Co., Bury.

Beaming, Warping and Sizing Machinery—*continued.*

Hattersley, George, & Sons, Ltd.,
Keighley.
Holt, Thomas, Ltd., Rochdale.
Hutchinson, Hollingworth & Co.,
Ltd., Huddersfield.
Leach & Co., Rochdale.
Livesey, Henry, Ltd., Blackburn.
Richardson, Tuer & Co., Manchester.
Smith, William, & Brothers, Ltd.,
Heywood.
White, W. B., Colne.
Whiteley, William, & Sons, Ltd.,
Huddersfield.

Beams and Girders—

(*See Bridges, Roofs, and Structural
Iron and Steel Work.*)

Bearing—Special Metals—

(*See Metals—Special.*)

Belt Pulleys—

(*See Mill Gear, Shafting and Shaft
Fittings.*)

Bending Rolls and Machines —Beams, Plates, Rails—

(*See also Rail Benders.*)

Bennie, James, & Sons, Glasgow.
Berry, Francis, & Sons, Sowerby
Bridge.
Berry, Henry, & Co., Leeds.
Bigwood, J., & Son, Wolverhampton.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Cameron, John, Manchester.
Campbells & Hunter, Leeds.
Craig & Donald, Johnstone.
Craven Brothers, Ltd., Manchester.
Crow, Harvey & Co., Glasgow.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Edward, George, & Co., Johnstone.
Fielding & Platt, Ltd., Gloucester.
Galloways, Ltd., Manchester.
Greenwood & Batley, Ltd., Leeds.
Hetherington, John, & Sons, Ltd.,
Manchester.
Hodgson, H. E., & Co., Cleckheaton.

Bending Rolls and Machines—Beams, Plates, Rails—*continued.*

Hulse & Co., Ltd., Manchester.
Midgley & Sutcliffe, Bradford.
Noble & Lund Felling-on-Tyne.
Pratt, F., & Co., Ltd., Halifax.
Scriven & Co., Leeds.
Shepherd, Hill & Co., Ltd., Leeds.
Smith Brothers & Co., Glasgow.
Smith, G. F., Halifax.
Smith, Hugh, & Co., Glasgow.
Stirk, John, & Sons, Halifax.
Ward & Haggas, Keighley.

Bessemer Steel—

(*See Steel and Iron Plates and Bars.*)

Bessemer Steel Plant—

(*See Steel Works Plant.*)

Bevelling Machines for Ship's Frames—

Davis & Primrose, Leith.

Bicycles—

(*See Cycles and Cycle Parts.*)

Billets and Blooms—

Bolton Iron and Steel Co., Ltd.,
Bolton.
Cammell, Charles, & Co., Ltd.,
Sheffield.
Fox, Samuel, & Co., Sheffield.
Jessop, Wm., & Sons, Ltd., Sheffield.
Spencer, John, & Sons, Ltd., New-
castle-on-Tyne.

Bitumen Refiners—

Callender's Cable and Construction
Co., Ltd., London.

Blast Furnace Plant—

(See also **Blowing Engines.**)

Adamson, Daniel, & Co., Dukinfield.
Ashmore, Benson, Pease & Co., Ltd.,
Stockton-on-Tees.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Fraser & Chalmers, Ltd., London.
Furness, Sir C., Westgarth & Co.,
Ltd., Middlesbro'.
Galloways, Ltd., Manchester.
Stevenson & Co., Ltd., Preston.
Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.
Yates & Thom, Blackburn.

Bleaching Machinery—

(See also **Dyeing Machinery.**)

Bentley & Jackson, Ltd., Bury.
Clayton, Goodfellow & Co., Ltd.,
Blackburn.
Coates, Victor, & Co., Ltd., Belfast.
Craig, A. F., & Co., Ltd., Paisley.
Downham, J., & Co., Bury.
Dykes, G. & J., Bury.
Edmeston, Archd., & Sons, Man-
chester.
Entwisle & Gass, Ltd., Bolton.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Fraser, Douglas, & Sons, Arbroath.
Fullerton, Hodgart & Barclay, Ltd.,
Paisley.
Hulse & Co., Ltd., Manchester.
Jackson & Brothers, Bolton.
Jefferson, Joseph, & Brothers, Bradford.
Lancaster & Tonge, Ltd., Manchester.
Matthews, William, & Co., Man-
chester.
Riley, J. H., & Co., Bury.
Ritchie, Hart & Co., Ltd., Belfast.
Robinson, Joseph, & Co., Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Thomson, Son & Co., Dundee.
Walker, Samuel, Manchester.

Blocks—Wood and Iron—

(See also **Pulley-Blocks.**)

Coubro & Scrutton, London.

Blooms—

(See **Billets and Blooms.**)

Blowers and Exhausters—

Bradley, R., & Co., Wakefield.
Brown Brothers & Co., Ltd., Edin-
burgh.
Carrick & Wardale Gateshead-on-Tyne
Daglish, Robert, & Co., St. Helens.
Donkin, Bryan, & Co., Ltd., London.
Drysedale & Co., Glasgow.
Empire Engineering Co., Manchester.
Foster, Joseph, & Sons, Preston.
Goodwin, Arnold, & Son, London.
Greenock Foundry Co., Greenock.
Günther, W., & Sons, Oldham.
Gwynne & Co., London.
Hanna, Donald & Wilson, Paisley.
Ledward, T., & Co., London and
Manchester.
Lees, Anderson & Co., Glasgow.
M'Kinnon, William, & Co., Aberdeen.
Meldrum Brothers, Manchester.
Milne, James, & Son, Ltd., Edinburgh.
Pope, W., & Son Ltd., London.
Thwaites Brothers, Ltd., Bradford.
Waller, George, & Co., Stroud.
Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.

Blowing Engines—for Furnace Blast, etc.—

Adamson, Daniel, & Co., Dukinfield.
Ashton, Frost & Co., Ltd., Blackburn.
Carmichael, James, & Co., Ltd.,
Dundee.
Carrick & Wardale, Gateshead-on-Tyne
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Fraser & Chalmers, Ltd., London.
Furness, Sir C., Westgarth & Co.,
Ltd., Middlesbro'.
Galloways, Ltd., Manchester.
Hanna, Donald & Wilson, Paisley.
Kitson & Co., Leeds.
Nasmyth, Wilson & Co., Ltd.,
Manchester.
St. George's Ironworks, Ltd., Man-
chester.
Saxon, George, Manchester.
Scott & Hodgson, Manchester.
Sharples, William, & Co., Ramsbottom.
Stevenson & Co., Ltd., Preston.
Walker Brothers, Wigan.
Walker, Eaton & Co., Sheffield.
Watson, Henry, & Sons, Newcastle-
on-Tyne.
Whitaker, C., & Co., Bradford.
Worsley Mesnes Iron Works Co.,
Wigan.
Yates & Thom, Blackburn.

Bobbin-Making Machinery—

Ayrton, William, & Co., Manchester.
 Heap, William, & Co., Ltd., Ashton-under Lyne.
 White, Thomas, & Sons, Paisley.

Boiler Furnaces—

Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Beeley, Thomas, Hyde.
 Bennis, Edward, & Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Burnet, Lindsay, & Co., Glasgow.
 Clark, George, Ltd., Sunderland.
 Davy Brothers, Ltd., Sheffield.
 Donkin, Bryan, & Co., Ltd., London.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Edie, Henry, & Co., London.
 Foster, Joseph, & Sons, Preston.
 Galloways, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Leeds Forge Co., Ltd., Leeds.
 Lees, Anderson & Co., Glasgow.
 M'Kie & Baxter, Glasgow.
 Meldrum Brothers, Manchester.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Oxley Brothers, Ltd., Sheffield.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Tuer & Co., Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Yates & Thom, Blackburn.

Boiler-Making Machine Tools—

(See Machine Tools.)

Boiler Mountings—

(See also Engine and Boiler Fittings.)

Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Beeley, Thomas, Hyde.

Boiler Mountings—continued.

Bennis, Edward, & Co., Ltd., Bolton.
 Bigwood, J., & Son, Wolverhampton.
 Billington & Newton, Longport.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Burnet, Lindsay, & Co., Glasgow.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter, James, & Sons, Stalybridge.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cockburn, David, Glasgow.
 Dewrance & Co., London.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Frost & Sons, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Gresham & Craven, Ltd., Manchester.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Madan, Charles S., & Co., Manchester.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brothers, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pease, Rhodes & Co., Ltd., Bradford.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Sharples, William, & Co., Ramsbottom.
 Smith, G. F., Halifax.
 Stevenson & Co., Ltd., Preston.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Taylor, Robert, & Sons, Huddersfield.
 Tinker, Shenton & Co., Ltd., Hyde.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Boilers—Steam—

Auxiliary and Donkey—

Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Booth, Joseph, & Brothers, Leeds.
 Burnet, Lindsay, & Co., Glasgow.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clayton, Son & Co., Ltd., Leeds.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Pais' y.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Daglish, Robert, & Co., St. Helens.
 Dickinson, John, & Sons, Ltd., Sun-
 derland.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., The,
 Dunston-on-Tyne.
 Eltringham, J. T., & Co., South
 Shields.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbro'.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, Thomas, & Son, Ltd., Leeds.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorns & Co., Ltd., Leith.
 Holdsworth & Sons, Bradford.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Lees, Anderson & Co., Glasgow.
 London and Glasgow Engineering
 and Iron Shipbuilding Co., Ltd.,
 Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Morton, S. & H., & Co., Leith.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering
 Co., Ltd., Wallsend-on-Tyne and
 Sunderland.
 Ramage & Ferguson, Ltd., Leith.
 Readhead, John, & Sons, South
 Shields.
 Richardson, Thomas, & Sons, Ltd.,
 Hartlepool.
 Simons, William, & Co., Ltd., Ren-
 frew.

Auxiliary and Donkey—continued.

Southgate Engineering Co., Ltd., New
 Southgate, near London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Taylor, Robert, & Sons, Huddersfield.
 Tinker, Shenton & Co., Ltd., Hyde.
 Walker Brothers, Wigan.
 Workman, Clark & Co., Ltd., Belfast.

Land—

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Amos & Smith, Hull.
 Beeley, Thomas, Hyde.
 Burnet, Lindsay, & Co., Glasgow.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clayton, Son & Co., Ltd., Leeds.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd. Paisley.
 Croom & Arthur, Leith.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Dunlop, David J., & Co., Port-Glas-
 gow.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., The,
 Dunston-on-Tyne.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd.,
 Leeds.
 Fraser & Chalmers, Ltd., London.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd.,
 Leicester.
 Gourlay Brothers & Co., Dundee.
 Green, Thomas, & Son, Ltd., Leeds.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.

Boilers—Steam—continued.**Land—continued.**

Hawthorns & Co., Ltd., Leith.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Holdsworth & Sons, Bradford.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 M'Laren, J. & H., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Elliott & Co., Ltd., Nottingham.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Morton, S. & H., & Co., Leith.
 Musgrave, John, & Son, Ltd., Bolton.
 Napier, R., & Sons, Ltd., Glasgow.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 North Eastern Marine Engineering Co., Ltd., Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Peckett & Sons, Bristol.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Simons, William, & Co., Ltd., Renfrew.
 Sinclair, George, Leith.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Taylor, Robert, & Sons, Huddersfield.
 Tinker, Shenton & Co., Ltd., Hyde.
 Walker Brothers, Wigan.
 Yates & Thom, Blackburn.

Marine—

Adamson, Daniel, & Co., Dukinfield.
 Allsup & Co., Ltd., Preston.
 Amos & Smith, Hull.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Blair & Co., Ltd., Stockton-on-Tees.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.

Marine—continued.

Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunlop David J., & Co., Port-Glasgow.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., The, Dunston-on-Tyne.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fleming & Ferguson, Ltd., Paisley.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Hodge, Samuel, & Sons, Ltd., London.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lewis, John, & Sons, Aberdeen.
 Lohmütz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 M'Kie & Baxter, Glasgow.
 Morton, S. & H., & Co., Leith.
 Muir & Houston, Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Ramage & Ferguson, Ltd., Leith.
 Rankin & Blackmore, Greenock.
 Readhead, John, & Sons, South Shields.

Boilers—Steam—continued.

Marine—continued.

Redpath & Paris, London.
 Richardson, Thomas, & Sons, Ltd.,
 Hartlepool.
 Richardson, Wigham, & Co., New-
 castle-on-Tyne.
 Ross & Duncan, Glasgow.
 Rowan, David, & Son, Glasgow.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Simons, William, & Co., Ltd., Ren-
 frew.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Tinker, Shenton & Co., Ltd., Hyde.
 Workman, Clark & Co., Ltd., Belfast.

Water Tube—

Adamson Daniel, & Co., Dukinfield.
 Burnet, Lindsay, & Co., Glasgow.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clydebank Engineering and Ship-
 building Co., Ltd., Clydebank,
 N.B.
 Coates, Victor, & Co., Ltd., Belfast.
 Coulthard, T., & Co., Preston.
 Davy Brothers, Ltd., Sheffield.
 Doxford, W., & Sons, Ltd., Sunder-
 land.
 Dunsmuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Eltringham, J. T., & Co., South
 Shields.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Fleming & Ferguson, Ltd., Paisley.
 Fraser & Chalmers, Ltd., London.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Gourlay Brothers & Co., Dundee.
 Greenock Foundry Co., Greenock.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co.,
 Ltd., Newcastle-on-Tyne.
 Inglis, A. & J., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.

Water Tube—continued.

London and Glasgow Engineering
 and Iron Shipbuilding Co., Ltd.,
 Glasgow.
 M'Kie & Baxter, Glasgow.
 Marshall, Sons & Co., Ltd., Gains-
 borough.
 Maudslay, Sons & Field, Ltd., London.
 Muir & Houston, Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 Palmer's Shipbuilding and Iron Co.,
 Ltd., Jarrow-on-Tyne.
 Penn, John, & Sons, Ltd., London.
 Readhead, John, & Sons, South
 Shields.
 Redpath & Paris, London.
 Rose, Downs & Thompson, Ltd.,
 Hull.
 Rowan, David, & Son, Glasgow.
 Thornycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Barrow-
 in-Furness.
 Wallsend Slipway and Engineering
 Co., Ltd., Newcastle-on-Tyne.
 Watson, Henry, & Sons, Newcastle-
 on-Tyne.
 Workman, Clark & Co., Ltd., Belfast.
 Yarrow & Co., Ltd., London.

Boiler Tubes—

(See also Tubes.)

Brown, John, & Co., Ltd., Sheffield.
 Galloways, Ltd., Manchester.

**Bolt and Nut Making
 Machinery—**

Craven Brothers, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Roch-
 dale.
 Kendall & Gent, Manchester.
 Marsden, Samuel, & Son, Ltd.,
 Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.

Bolts, Rivets, Screws, Nuts and Washers—

(See also Screws and Studs.)

Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Ford-Smith, F., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Jardine, John, Nottingham.
 Kirby Banks Screw Co., Ltd., Leeds.
 Manganese Bronze and Brass Co., Ltd., London.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Nottingham Engineering Co., Ltd., Nottingham.
 Pool, L., & Son, Leeds.
 Stone, J., & Co., London.

Bookbinders' Machinery—

Bremner Machine Co., Otley.
 Dawson, H. & J., Bradford.
 Dawson & Sons, Otley.
 Furnival & Co., Manchester.
 Greig, John, & Sons, Edinburgh.
 Hopkinson & Cope, London.
 Miller & Richard, Edinburgh.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Payne & Sons, Otley.
 Pearson & Bennion, Ltd., Leicester.
 Richmond, Joseph, & Co., London.

Boot and Shoe Making Machinery—

Bradbury & Co., Ltd., Oldham.
 Davis, A. J., Leicester.
 Greenwood & Batley, Ltd., Leeds.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Glover, M., & Co., Leeds.
 Mudd, W. R., & Co., Leicester.
 Pearson & Bennion, Ltd., Leicester.
 Pegg, Samuel, & Sons, Leicester.
 Standard Engineering Co., Leicester.

Boring and Tapping Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellars, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Sirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Box-Making Machinery—

Cole, T. & W., London.
 Glover, M., & Co., Leeds.
 M'Dowall, John, & Sons, Johnstone.
 Sagar, J., & Co., Halifax.

Brakes—Railway—

(See also Railway Plant.)

Fraser & Chalmers, Ltd., London.

Brass and Bronze Founders and Finishers—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adams, Thomas, Manchester.
 Adams, W. W., London.
 Adamson, Daniel, & Co., Dukinfield.
 Allen, Harrison & Co., Manchester.

Brass and Bronze Founders and Finishers—continued.

Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Bailey & Garnett, Ltd., Stalybridge.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Barns, J. C., London.
 Barraclough, Joseph, & Sons, Barnsley.
 Barrett, R., & Son, Ltd., London.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Blundell's London Copper and Brass Works Co., Ltd., London.
 Bowen & Co., London.
 Broad, G., & Son, London.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter, James, & Sons, Stalybridge.
 Central Marine Engine Works, West Hartlepool.
 Chapman, Carverhill & Co., Newcastle-on-Tyne.
 Clark, Bunnett & Co., Ltd., London.
 Clark, J. & T., Bradford.
 Clarke, T. A. W., Leicester.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cockburn, David, Glasgow.
 Cooper Brothers, Ltd., Burnley.
 Cowen, G. R., & Co., Nottingham.
 Cran, John, & Co., Leith.
 Crook, Thomas T., Bolton.
 Crow, George, London.
 Daglish, Robert, & Co., St. Helens.
 Darker, F., & Co., London.
 Dewrance & Co., London.
 Dickinson, John, & Co., Keighley.
 Dixon, S., & Son, Leeds.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dryden, Thomas, Preston.
 Dykes, G. & J., Bury.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eastwood, Walter, Ashton-under-Lyne.
 Edie, Henry, & Co., London.
 Edmondson, John A., Leeds.
 Empire Engineering Co., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Frost & Sons, London.

Brass and Bronze Founders and Finishers—continued.

Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Ginman & Son, Plumstead.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorns & Co., Ltd., Leith.
 Heald, John, Chorley.
 Henderson, D. & W., & Co., Glasgow.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jefferson, Joseph, & Brothers, Bradford.
 Jenkins, C., & Co., London.
 Johnston, R., & Co., Ltd., London.
 Johnson, William, & Sons, Leeds.
 Jones, John, & Sons, Liverpool.
 Kenworthy, Taylor & Co., Barnsley.
 Kincaid, John G., & Co., Greenock.
 Kirkham, J. & W., Bolton.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Lawson, J., London.
 Livesey, Henry, Ltd., Blackburn.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 Low, James F., & Co., Monifieth.
 Madan, Charles S., & Co., Manchester.
 Manganese Bronze and Brass Co., Ltd., London.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Marchant, G. M., Huddersfield.
 Marner, G. W., London.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 Mayes, John, London.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Mechan & Sons, Glasgow.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morris, J., & Co., London.
 Morton & Edwards, Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.

Brass and Bronze Founders and Finishers—continued.

Needham Brothers & Brown, Barnsley.
Noble & Lund, Felling-on-Tyne.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.

Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.

Pease, Rhodes & Co., Ltd., Bradford.

Phosphor Bronze Co., Ltd., London.

Pilling, John, & Sons, Ltd., Colne.

Pope, W., & Son, Ltd., London.

Ranger & Hooper, London.

Rankin & Blackmore, Greenock.

Ratcliffe, J., & Sons, Leeds.

Redpath & Paris, London.

Remington, T. W., & Co., London.

Reynolds, James, & Co., Belfast.

Richardson, Thomas, & Sons, Ltd., Hartlepool.

Ritchie, Hart & Co., Ltd., Belfast.

Robinson, J. H., London.

Roger, R., & Co., Stockton-on-Tees.

Rosling & Appleby, Bradford.

Russell, S., & Sons, Leicester.

Ryder, T., & Co., Manchester.

St. George's Ironworks, Ltd., Manchester.

Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.

Seager, L. J. & C., Dartford.

Sharples, William, & Co., Ramsbottom.

Shoard, W., London.

Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.

Stevenson & Co., Ltd., Preston.

Stewart, John, & Sons, Ltd., London.

Stone, J., & Co., London.

Storey, Isaac, & Sons, Manchester.

Strang, Joseph, Ltd., Ramsbottom.

Thwaites Brothers, Ltd., Bradford.

Tomlinson, James (Rochdale) Ltd., Rochdale.

Wales, George, & Co., London.

Wainwright, Thomas, & Co., Stalybridge.

Wallend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.

Watson, Henry, & Sons, Newcastle-on-Tyne.

Wearmouth Foundry Co., Ltd., Sunderland.

Wells, Jonas, Keighley,

West, John, London.

White, W. B., Colne.

Whitley Partners, Leeds.

Wilkinson, G., & Sons, Keighley.

Wilkinson, P., & Sons, London.

Williams Brothers, Sheffield.

Brass and Bronze Founders and Finishers—continued.

Wood, John & Edward, Bolton.

Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Wren, Henry, & Co., Manchester.

Brass and Copper Tubes—

(See Tubes.)

Brass Shells and Liners—

Lancaster & Tonge, Ltd., Manchester.

Milne, James, & Son, Ltd., Edinburgh.

Thwaites Brothers, Ltd., Bradford.

Watson, Henry, & Sons, Newcastle-on-Tyne.

Wells, Jonas, Keighley.

Whitley Partners, Leeds.

Bread and Biscuit Machinery—

Morrison, William, & Sons, Leith.

Breakers—

(See Coal and Coke Breakers, Quartz Crushers, Stone Breakers.)

Brewery and Distillery Plant—

Abernethy, James, & Co., Aberdeen.

Bertrams, Ltd., Edinburgh.

Blundell's London Copper and Brass Works, Ltd., London.

Coates, Victor, & Co., Ltd., Belfast.

Daglish, Robert, & Co., St. Helens.

Fawcett, Preston & Co., Ltd., Liverpool.

Fraser, John, & Son, London.

Fullerton, Hodgart & Barclay, Ltd., Paisley.

Gimson & Co. (Leicester), Ltd., Leicester.

Hunter & English, London.

Lancaster & Tonge, Ltd., Manchester.

Lees, Anderson & Co., Glasgow.

Marsden, John, & Son, Liverpool.

Mather, Alex., & Son, Edinburgh.

Milne, James, & Son, Ltd., Edinburgh, Moreland, Richard, & Son, Ltd., London.

Pease, Rhodes & Co., Ltd., Bradford.

Ryder, T., & Co., Manchester.

Waller, George, & Co., Stroud.

Walker, James, & Son, Edinburgh.

West End Engine Works Co., Edinburgh.

Woods, Hamilton, & Co., Ltd., Manchester.

Brick and Tile-Making Machinery—

Bradley & Craven, Wakefield.
 Bradley, R., & Co., Wakefield.
 Clayton, Howlett & Co., London.
 Crook, Thomas T., Bolton.
 Davis, A. J., Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Douglas Forge Co., Ltd., Wigan.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser & Chalmers, Ltd., London.
 Johnson, William, & Sons, Leeds.
 Middleton, Thomas, & Co., London.
 Moore, James, & Sons, Ltd., Belfast.
 Pegg, Samuel, & Son, Leicester.
 Pullan & Mann, Leeds.
 Scholefield, R., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Thornton & Crebbin, Bradford.

Bridge Foundation Cylinders— (See Cylinders for Bridge Foundations.)

Bridges, Roofs and Structural Iron and Steel Work—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Bennis, Edward, & Co., Ltd., Bolton.
 Berry, John, Halifax.
 Booth, Joseph, & Brothers, Leeds.
 Clark, Bunnnett & Co., Ltd., London.
 Clayton, Son & Co., Ltd., Leeds.
 Cole, T. & W., London.
 Cran, John, & Co., Leith.
 De Bergue & Co., Ltd., Manchester.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Edie, Henry, & Co., London.
 Eltringham, J. T., & Co., South Shields.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Hayward Brothers & Eckstein, Ltd., London.
 Heald, John, Chorley.

Bridges, Roofs and Structural Iron and Steel Work—continued.

Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jackson & Brother, Bolton.
 Kerr, Stuart & Co., Stoke-on-Trent.
 M'Kinnon, William, & Co., Aberdeen.
 Mather, Alex., & Son, Edinburgh.
 Mechan & Sons, Glasgow.
 Moreland, Richard, & Son, Ltd., London.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Oxley, George, & Sons, Sheffield.
 Richards, W., & Son, Leicester.
 St. Pancras Ironworks Co., Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Thornton & Crebbin, Bradford.
 Turner & Co., London.
 Walker Brothers, Wigan.
 West's Gas Improvement Co., Ltd., Manchester.

Briquette-Making Machinery—

Johnson, William, & Sons, Leeds.
 Kincaid, John G., & Co., Greenock.
 Middleton, Robert, Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.

Bronze Founders—

(See Brass and Bronze Founders.)

Buffers—Railway—

(See also Railway Plant.)

Allen, Edgar, & Co., Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Kirkstall Forge Co., Leeds.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Turton, George, Platts & Co., Sheffield.

Buffing Wheels—

Glover, M., & Co., Leeds.
 Luke & Spencer, Ltd., Manchester.

Buoys—Mooring—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Hanna, Donald & Wilson, Paisley.
 Jones, John, & Sons, Liverpool.
 Mechan & Sons, Glasgow.

Cables—Chain—

(See Chains.)

Cables—Haulage—

(See Wire and Wire Ropes.)

Cable-Haulage Machinery—

(See Haulage Machinery and Appliances.)

Cable-Making Machinery—

Clarke, T. A. W., Leicester.
 Johnson & Phillips, Old Charlton.

Cables & Wires—Electric Light, Telegraph and Telephone.

Callender's Cable and Construction Co., Ltd., London.
 Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Phosphor Bronze Co., Ltd., London.
 Siemens Brothers & Co., Ltd., London.

Cableways—

Henderson, John M., Aberdeen.

Calenders —

Bently & Jackson, Ltd., Bury.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwisle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Milne, James, & Son, Ltd., Edinburgh.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Robinson, Joseph, & Co., Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Umpherston & Co., Ltd., Leith.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Walker, Samuel, Manchester.
 Walmsley, Charles, & Co., Ltd., Bury.

Calico Printing and Dyeing Machinery—

Edmeston, Archd., & Sons, Manchester.
 Entwisle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Strang, Joseph, Ltd., Ramsbottom.
 Walker, Samuel, Manchester.

Capstans—Steam, Hydraulic, Hand—

(See also Hydraulic Capstans.)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Alley & Maclellan, Glasgow.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.

Capstans—Steam, Hydraulic, Hand—
continued.

Berry, Henry, & Co., Leeds.
Brown Brothers & Co., Ltd., Edinburgh.
Carrick & Wardale, Gateshead-on-Tyne.
Clarke, Chapman & Co., Gateshead-on-Tyne.
Cowans, Sheldon & Co., Ltd., Carlisle.
Daglish, Robert, & Co., St. Helens.
Davis & Co., Ltd., London.
Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
Fielding & Platt, Ltd., Gloucester.
Fisher & Co., Paisley.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Galloways, Ltd., Manchester.
Harfield & Co., Ltd., Blaydon-on-Tyne.
Hunter & English, London.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kincaid, John G., & Co, Greenock.
Middleton, Robert, Leeds.
Moreland, Richard, & Son, Ltd., London.
Musgrave Brothers, Leeds.
Napier Brothers, Ltd., Glasgow.
Qualter, Hall & Co., Barnsley.
Reid, Thomas, & Sons, Paisley.
Roger, R., & Co., Stockton-on-Tees.
Smith, Hugh, & Co., Glasgow.
Walker Brothers, Wigan.
West's Gas Improvement Co., Ltd., Manchester.
Wood & Gee, Wigan.

Carbons for Electrical Purposes

Crompton & Co., Ltd., London and Chelmsford.
Johnson & Phillips, Old Charlton.
Mavor & Coulson, Ltd., Glasgow.
Siemens Brothers & Co., Ltd., London.

Carpet-Making Machinery—

(See also Looms.)

Craig, A. F., & Co., Ltd., Paisley.
Crossley, John, & Co. Halifax,
Hattersley, George, & Sons, Ltd.,
Keighley.

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Carpet-Making Machinery—continued.

Kenworthy, Royston & Co., Huddersfield.
Smith, William, & Brothers, Ltd., Heywood.
Taylor, Wordsworth & Co., Leeds.

Cartridge-Making Machinery—

Greenwood & Batley, Ltd., Leeds.
Stevenson & Co., Ltd., Preston.

Cement-Mill Plant—

Clayton, Howlett & Co., London.
Death & Harris, Leicester.
Fraser & Chalmers, Ltd., London.
Hind & Lund, Ltd., Preston.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
Johnson, William, & Sons, Leeds.
Pulsonmeter Engineering Co., Ltd., London.
St. George's Ironworks, Ltd., Manchester.
Seager, L. J. & C., Dartford.
Shepherd, Hill & Co., Ltd., Leeds.
Waller, George, & Co., Stroud.
Winder Brothers, Ltd., Sheffield.

Centrifugal Pumps—

(See Pumps and Pumping Engines.)

Chains—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Larmuth, Thomas, & Co., Manchester.
West's Gas Improvement Co., Ltd., Manchester.

Charcoal-Making Plant—

Blake, Barclay & Co., Greenock.

Chemical Works Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne,
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-Tyne.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Edie, Henry, & Co., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hunter & English, London.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson, William, & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 McNeil, John, & Co., Glasgow.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Mechan & Sons, Glasgow.
 Meldrum Brothers, Manchester.
 Riley, J. F., Huddersfield.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Walker Brothers, Wigan.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Chilled and Grain Rolls—

(See Rolls and Rolling Plant.)

Chucks—

Birch, G., & Co., Manchester.
 Holyrod, John, & Co., Ltd., Rochdale.
 Pratt, F., & Co., Ltd., Halifax.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Wade, Josiah, Ltd., Halifax.

Cloth-Finishing Machinery—

Bentley & Jackson, Ltd., Bury.
 Bywater, William, Leeds.
 Craig, A. F., & Co., Ltd., Paisley.
 Crossley, John, & Co., Halifax.
 Edmeston, Archd., & Sons, Manchester.
 Entwisle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Gadd, Thomas (Hulse & Co., Ltd. Proprietors), Manchester.
 Hacking & Co., Bury.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Huddersfield.
 Kilburn, R., & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Nasymth, Wilson & Co., Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Smith, William, & Brothers, Ltd., Heywood.
 Strang, Joseph, Ltd., Ramsbottom.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Taylor, Wordsworth & Co., Leeds.
 Thomson, Son & Co., Dundee.
 Tomlinson, G. W., Huddersfield.
 Tonlinson, James (Rochdale), Ltd., Rochdale.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Cloth-Raising Machinery—

Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Kenworthy, Royston & Co., Huddersfield.
 Riley, J. H., & Co., Bury.

Clutches—Friction—

(See Friction Clutches.)

Coal and Coke Breakers—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Blake, Barclay & Co., Greenock.

Coal and Coke Breakers—continued.

Dickinson, John, & Co., Keighley.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Ryder, William, Bolton.
 Spetch & Thomas, Bradford.
 Thwaites Brothers, Ltd., Bradford.
 Waller, George, & Co., Stroud.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Winder Brothers, Ltd., Sheffield.

Coal Drills and Cutters—

(See Rock Drills.)

Coal Hoists—

Bennis, Edward, & Co., Ltd., Bolton.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Goodwin, Arnold, & Son, London.
 Haigh, W. B., & Co., Oldham.
 Kincaid, John G., & Co., Greenock.
 Qualter, Hall & Co., Barnsley.
 Stevenson & Co., Ltd., Preston.
 Turner & Co., London.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Wood & Gee, Wigan.

**Coal-Screening and Washing
Plant—**

Bradley, R., & Co., Wakefield.
 Qualter, Hall & Co., Barnsley.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Wood & Gee, Wigan.

Cocks—

(See Valves, Cocks, etc.; also Engine
and Boiler Fittings.)

Cocoa and Coffee Machinery—

Abernethy, James, & Co., Aberdeen.
 Kenworthy, Royston & Co., Hud-
 dersfield.
 Perkin & Co., Ltd., Leeds.
 Wailes, George, & Co., London.

Cogging Mills—

(See Rolls and Rolling-Mill Plant.)

Coke Breakers—

(See Coal and Coke Breakers.)

Coke Ovens—

Ashmore, Benson, Pease & Co., Ltd.
 Stockton-on-Tees.

Colliery Plant—

(See Mining Machinery.)

Concrete-Mixing Plant—

(See also Mortar Mills.)

Douglas Forge Co., Ltd., Wigan.
 Jessop & Appleby Brothers (Leicester
 and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Stothert & Pitt, Ltd., Bath.
 Waller, George, & Co., Stroud.

Condensing and Cooling Plant—

Ashton, Frost & Co., Ltd., Blackburn.
 Bailey, W. H., & Co., Ltd., Man-
 chester.
 Browett, Lindley & Co., Ltd., Patri-
 croft.
 Caird & Rayner, London.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Hanna, Donald & Wilson, Paisley.
 Holliday, Read, & Sons, Ltd., Hud-
 dersfield.
 Jackson, P. R., & Co., Ltd., Man-
 chester.
 Kirkaldy, John, Ltd., London.
 Ledward, T., & Co., London and
 Manchester.

Condensing and Cooling Plant—cont.

Manlove, Alliott & Co., Ltd., Nottingham.
 Milne, James, & Son, Ltd., Edinburgh.
 North-Eastern Marine Engineering Co., Ltd., Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Saxon, George, Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thomson, Son & Co., Dundee.
 Vauxhall Ironworks Co., Ltd., London.
 Wailes, George, & Co., London.
 Weir, G. & J., Ltd., Glasgow.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Contractors' Plant—

Berry, John, Halifax.
 Booth, Joseph, & Brothers, Leeds.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Crook, Thomas T., Bolton.
 Dean, Smith & Grace, Keighley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Glover, M., & Co., Leeds.
 Henderson, John M., Aberdeen.
 Hudswell, Clarke & Co., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Pratt, F., & Co., Ltd., Halifax.
 Shepherd, Hill & Co., Ltd., Leeds.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Spencer, John, & Co., Keighley.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Ward & Haggas, Keighley.

Conveyors and Elevators—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blake, Barclay & Co., Greenock.

Conveyors and Elevators—continued.

Booth, Joseph, & Brothers, Leeds.
 Calvert & Co., Huddersfield.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Cran, John, & Co., Leith.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Henderson, John M., Aberdeen.
 Hind & Lund, Ltd., Preston.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (London and Leicester), Ltd., Leicester.
 Johnson, William, & Son, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Lees, Anderson & Co., Glasgow.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Qualter, Hall & Co., Barnsley.
 Pickerings, Ltd., Stockton-on-Tees.
 Pullan & Mann, Leeds.
 Stevenson & Co., Ltd., Preston.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 West End Engine Works Co., Edinburgh.
 West's Gas Improvement Co., Ltd., Manchester.
 Wood & Gee, Wigan.
 Wren, Henry, & Co., Manchester.

Copper Smelters and Refiners—

Elmore's Patent Copper Depositing Co., Ltd., Leeds.

Coppersmiths and Braziers—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Allen, Harrison & Co., Manchester.
 Blundell's London Copper and Brass Works Co., Ltd., London.
 Caird & Rayner, London.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Feather, George R., Bolton.

Coppersmiths and Braziers—continued.

Greenock Foundry Co., Greenock.
Hall, Russell & Co., Ltd., Aberdeen.
Hawthorns & Co., Ltd., Leith.
Henderson, D. & W., & Co., Glasgow.
Jenkins, C., & Co., London.
Manlove, Alliott & Co., Ltd., Nottingham.
Marsden, Ellis, Liverpool.
Marsden, John, & Son, Liverpool.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Roger, R., & Co., Stockton-on-Tees.
Ryder, T., & Co., Manchester.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Stewart, John, & Co., Ltd., London.
Stone, J., & Co., London.
Storey, Isaac, & Sons, Manchester.
Wailles, George, & Co., London.
Wearmouth Foundry Co., Ltd., Sunderland.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Copper Tube Drawing Plant—

(See Tube Drawing Plant.)

Copper Tubes—

(See Tubes.)

Cord and Braid Machinery—

(See Rope, Twine and Braid Machinery.)

Cornish Boilers—

(See Boilers—Steam.)

Corn-Mill Machinery—

Foster, Joseph, & Sons, Preston.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Hind & Lund, Ltd., Preston.
Mather, Alex., & Son, Edinburgh.
Tomlinson, James (Rochdale), Ltd., Rochdale.

Cotton-Carding Machinery—

(See Cotton Preparing and Spinning Machinery.)

Cotton Preparing and Spinning Machinery—

Ashworth, Elijah, Manchester.
Atherton Brothers, Ltd., Preston.
Bailey & Garnett, Ltd., Stalybridge.
Brooks & Doxey, Ltd., Manchester.
Butterworth & Dickinson, Burnley.
Curtis, Sons & Co., Manchester.
Dobson & Barlow, Ltd., Bolton.
Dodd, Samuel, Oldham.
Hacking & Co., Bury.
Harding, Richardson, Rhodes & Co., Ltd., Leeds.
Hetherington, John, & Sons, Ltd., Manchester.
Holt, Thomas, Ltd., Rochdale.
Lees, Asa, & Co., Ltd., Oldham.
Mason, John, Rochdale.
Platt Brothers & Co., Ltd., Oldham.
Richardson, Tuer & Co., Manchester.
Robinson, William, & Son, Oldham.
Smith, William, & Brothers, Ltd., Heywood.
Tatham, William, & Co., Rochdale.
Taylor, Lang & Co., Ltd., Stalybridge.
White, W. B., Colne.
Whiteley, William, & Sons, Ltd., Huddersfield.

Cotton Presses—

(See Presses—Screw and Steam Hydraulic Presses.)

Cotton Waste, Wadding, etc., Machinery—

Ashworth, Elijah, Manchester.
Brooks & Doxey, Ltd., Manchester.
Curtis, Sons & Co., Manchester.
Dobson & Barlow, Ltd., Bolton.
Dodd, Samuel, Oldham.
Dykes, G. & J., Bury.
Hetherington, John, & Sons, Ltd., Manchester.
Holt, Thomas, Ltd., Rochdale.
Lees, Asa, & Co., Ltd., Bolton.
Tatham, William, & Co., Rochdale.

Couplings—Railway—

Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Turton, George, Platts & Co., Sheffield.

Couplings—Shaft—

(See Mill Gearing, Shafting and Shaft Fittings.)

Cranes and Travellers—Steam, Hydraulic, Electric—

(See also Electric Cranes, Hydraulic Cranes and Goliath Cranes.)

Abernethy, James, & Co., Aberdeen.
 Adamson, Joseph, & Co., Hyde.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.
 Barker, John, & Sons, Ltd., Oldham.
 Bennis, Edward, & Co., Ltd., Bolton.
 Berry, Henry, & Co., Leeds.
 Berry, John, Halifax.
 Bigwood, J., & Son, Wolverhampton.
 Booth, Joseph, & Brothers, Leeds.
 Bridges, Thomas, & Sons, Wolverhampton.
 Brightside Foundry Co., Ltd., Sheffield.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Carrick & Ritchie, Edinburgh.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bunnett & Co., Ltd., London.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clark, J. & T., Bradford.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craig, A. F., & Co., Ltd., Paisley.
 Craven Brothers, Ltd., Manchester.

Cranes and Travellers—Steam, Hydraulic, Electric—continued.

Crompton & Co., Ltd., London and Chelmsford.
 Davis & Primrose, Leith.
 Dickinson, John, & Co., Keighley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Gooluen, Ltd., Erith.
 Fielding & Platt, Gloucester.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Grieve, John, & Co., Motherwell.
 Hanna, Donald & Wilson, Paisley.
 Henderson, John M., Aberdeen.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Higginbottom & Mannock, Manchester.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Hulse & Co., Ltd., Manchester.
 Hunter & English, London.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton.
 Kincaid, John G., & Co., Greenock.
 Larmuth, Thomas, & Co., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Marshall, Fleming & Jack, Motherwell.
 Mavor & Coulson, Ltd., Glasgow.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Napier Brothers, Ltd., Glasgow.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Pickerings, Ltd., Stockton-on-Tees.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Riley, J. F., Huddersfield.
 Roger, R., & Co., Stockton-on-Tees.
 Ross, R. G., & Son, Glasgow.
 Russell, George, & Co., Motherwell.
 Russell, S., & Sons, Leicester.
 St. George's Ironworks, Ltd., Manchester.

**Cranes and Travellers—Steam,
Hydraulic, Electric—continued.**

Schofield & Taylor, Huddersfield.
Shanks, Alex., & Son, Ltd., Arbroath.
Shanks, Thomas, & Co., Johnstone.
Siemens Brothers & Co., Ltd., London.
Smith, Hugh, & Co., Glasgow.
Smith, John, Keighley.
Smith, Thomas, Leeds.
Southgate Engineering Co., Ltd.,
New Southgate, near London.
Spencer, James, & Co., Manchester.
Stephenson, Robert, & Co., Ltd.,
Newcastle-on-Tyne.
Stevenson & Co., Ltd., Preston.
Stothert & Pitt, Ltd., Bath.
Strang, Joseph, Ltd., Ramsbottom.
Taylor & Hubbard, Leicester.
Umpherson & Co., Ltd., Leith.
Vaughan & Son, Manchester.
Waygood, R., & Co., Ltd., London.
Whitaker, C., & Co., Bradford.
Wood, John & Edward, Bolton.
Wren, Henry, & Co., Manchester.
Yates & Thom, Blackburn.

Crank Axles—

Armstrong, Sir W. G., Whitworth &
Co., Ltd., Newcastle-on-Tyne and
Manchester.
Bolton Iron and Steel Co., Ltd.,
Bolton.
Brown, John, & Co., Ltd., Sheffield.
Cammell, Charles, & Co., Ltd.,
Sheffield.
Firth, Thomas, & Sons, Ltd., Sheffield.
Ince Forge Co., Wigan.
Jessop, Wm., & Sons, Ltd., Sheffield.
Nasmyth, Wilson & Co., Ltd., Man-
chester.
Rogerson, John, & Co., Ltd., Wols-
ingham.
Saxon, George, Manchester.
Schofield & Taylor, Huddersfield.
Scott & Hodgson, Manchester.
Spencer, John, & Sons, Ltd., New-
castle-on-Tyne.
Stephenson, Robert, & Co., Ltd.,
Newcastle-on-Tyne.
Vickers, Sons & Maxim, Ltd., Sheffield.
White, W. B., Colne.
Woodhouse & Rixson, Sheffield.

Crank Shafts—

(See also **Shafting—Marine; and
Forgings.**)

Amos & Smith, Hull.
Armstrong, Sir W. G., Whitworth &
Co., Ltd., Manchester and New-
castle-on-Tyne.
Bigwood, J., & Son, Wolverhampton.
Bolton Iron and Steel Co., Ltd.,
Bolton.
Brown Brothers & Co., Ltd., Edin-
burgh.
Brown, John, & Co., Ltd., Sheffield.
Calvert & Co., Huddersfield.
Cammell, Charles, & Co., Ltd., Shef-
field.
Carmichael, James, & Co., Ltd.,
Dundee.
Central Marine Engine Works, West
Hartlepool.
Clark, George, Ltd., Sunderland.
Crow, Harvey & Co., Glasgow.
Darlington Forge Co., Ltd., Darling-
ton.
Dickinson, John, & Sons, Ltd., Sun-
derland.
Earle's Shipbuilding and Engineering
Co., Ltd., Hull.
Firth, Thomas, & Sons, Ltd., Sheffield.
Furness, Sir C., Westgarth & Co.,
Ltd., Middlesbro'.
Galloways, Ltd., Manchester.
Greenock Foundry Co., Greenock.
Hawthorn, R. & W., Leslie & Co.,
Ltd., Newcastle-on-Tyne.
Hawthorns & Co., Ltd., Leith.
Henderson, D. & W., & Co., Glasgow.
Ince Forge Co., Wigan.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop, Wm., & Sons, Ltd., Sheffield.
Jones, John, & Sons, Liverpool.
Kincaid, John G., & Co., Greenock.
Kirkstall Forge Co., Leeds.
Lancaster & Tonge, Ltd., Manchester.
M'Kie & Baxter, Glasgow.
Musgrave, John, & Son, Ltd., Bolton.
North-Eastern Marine Engineering
Co., Ltd., Wallsend-on-Tyne and
Sunderland.
Palmer's Shipbuilding and Iron Co.,
Ltd., Jarrow-on-Tyne.
Ramage & Ferguson, Ltd., Leith.
Richardson, Thomas, & Sons, Ltd.,
Hartlepool.
Rogerson, John, & Co., Ltd., Wols-
ingham.
Saxon, George, Manchester.
Schofield & Taylor, Huddersfield.

Crank Shafts—*continues*.

Scott & Hodgson, Manchester.
 Smith, Daniel, & Co., Wolverhampton.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Strang, Joseph, Ltd., Ramsbottom.
 Urmson & Thompson, Oldham.
 Vickers, Sons & Maxim, Ltd., Sheffield.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 White, W. B., Colne.
 Wood, John & Edward, Bolton.
 Woodhouse & Rixson, Sheffield.

Creosoting Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Pearn, Frank, & Co., Ltd., Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Waller, George, & Co., Stroud.

Crucibles—

Oxley Brothers, Ltd., Sheffield.
 Walker, Eaton & Co., Sheffield.

Crushers—

See Ore-Crushing Machinery, Oil-Crushing Machinery, Coal and Coke Breakers, Seed - Crushing Machinery, Stone Breakers.)

Cupolas—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Hanna, Donald & Wilson, Paisley.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Stevenson & Co., Ltd., Preston.
 Thwaites Brothers, Ltd., Bradford.

Cycles and Cycle Parts—

Bradbury & Co., Ltd., Oldham.
 Campion Cycle Co., Ltd., Nottingham.
 Cook, S., & Co., Bury.
 Crowley, John, & Co., Ltd., Sheffield.
 Eclipse Machine Co., Ltd., Oldham.
 Gazelle Cycle Co., Nottingham.
 Humber & Co., Ltd., Nottingham.
 Humber, Synner & Co., Ltd., Nottingham.
 "Little John" Cycle Co., Ltd., Nottingham.
 Macgregor Cycle and Engineering Co., Ltd., Nottingham.
 New Found Cycle Components Co., Leicester.
 Raleigh Cycle Co., Ltd., Nottingham.
 Robin Hood Cycle Co., Ltd., Nottingham.
 Simpson's Lever Chain and Cycle Co., Draycott.
 Springfield Cycle Co., Ltd., Nottingham.
 Sudworth & Settle, Ltd., Nottingham.
 Trent Cycle Co., Ltd., Nottingham.
 Victor Cycle Co., Ltd. (John Jardine), Nottingham.
 Webb, R. W., Ltd., Draycott.
 Whiteley's Acme Cycle Co., Ltd., Leeds.

Cylinders for Bridge Foundations—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Eltringham, J. T., & Co., South Shields.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Pease, Rhodes & Co., Ltd, Bradford.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Thornton & Crebbin, Bradford.

Cylinders for Gas and Air—

Lees, Anderson & Co., Glasgow.
 Pope, W., & Son, Ltd., London.

Dairy Machinery—

Bradford, T., & Co., Manchester.
 Milne, James, & Son, Ltd., Edinburgh.

Derrick Cranes—

(See Cranes.)

Desiccators—

Farmer, Sir James, & Sons, Ltd.,
Manchester.
Manlove, Alliott & Co., Ltd., Not-
tingham.

Destructors—Refuse—

Adamson, Daniel, & Co., Dukinfield.
Manlove, Alliott & Co., Ltd., Not-
tingham.
Meldrum Brothers, Manchester.

Diggers—Steam—

(See Excavators—Steam.)

Disintegrators and Pulverizers

Barry, Henry, & Co., Ltd., Aberdeen.
Fraser & Chalmers, Ltd., London.
Good & Menzies, Ltd., Hull.
Greenwood & Batley, Ltd., Leeds.
Harpers, Ltd., Aberdeen.
Harrison & Hammond, Wakefield.
Hind & Lund, Ltd., Preston.
Johnson, William, & Sons, Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.
Middleton, Robert, Leeds.
Qualter, Hall & Co., Barnsley.
Rose, Downs & Thompson, Ltd.,
Hull.
Strang, Joseph, Ltd., Ramsbottom.

Distilling Apparatus—Water—

(See also Oil Distilling Plant.)

Burnet, Lindsay, & Co., Glasgow.
Caird & Rayner, London.
Chaplin, Alex., & Co., Glasgow.
Fawcett, Preston & Co., Ltd., Liver-
pool.
Holliday, Read, & Sons, Ltd., Hud-
dersfield.
Normandy's Patent Marine Aerated
Fresh Water Co., Ltd., London.
Pease, Rhodes & Co., Ltd., Leeds.
Weir, G. & J., Ltd., Glasgow.

Distilling Plant—

(See Brewery and Distilling Plant.)

Diving Apparatus—

Pulsometer Engineering Co., Ltd.
London.
Siebe, Gorman & Co., London.

Donkey Boilers—

(See Boilers—Steam.)

Dredgers and Dredge Plant—

Amos & Smith, Hull.
Drysdale & Co., Glasgow.
Fleming & Ferguson, Ltd., Paisley.
Gwynne & Co., London.
Hunter & English, London.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.
Kincaid, John G., & Co., Greenock.
Lobnitz & Co., Ltd., Renfrew.
Rose, Downs & Thompson, Ltd.,
Hull.
Simons, William, & Co., Ltd., Ren-
frew.
Stewart, John, & Son, Ltd., London.
Vickers, Sons & Maxini, Ltd., Bar-
row-in-Furness.

Drilling Machines—

(See also Radial Drills, Boring and
Tapping Machines.)

Armstrong, Sir W. G., Whitworth
& Co., Ltd., Manchester.
Asquith, William, Halifax.
Atlas Engineering Co., Manchester.
Berry, Francis, & Sons, Sowerby
Bridge.
Bolton Engineering Co., Bolton.
Buckton, Joshua, & Co., Ltd., Leeds.
Campbells & Hunter, Leeds.
Craven Brothers, Ltd., Manchester.
Crookes, Roberts & Co., Sheffield.
Crossley & Co., Johnstone.
Darling & Sellers, Ltd., Keighley.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Fraser, Douglas, & Sons, Arbroath.

Drilling Machines—continued.

Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scott Brothers, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Siemens Brothers & Co., Ltd., London.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Driving Engines—

(See also High-Speed Engines, Locomotives, Marine Engines, Portable Engines, Rolling-Mill Engines, Traction Engines, Tramway Engines.)

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Berry, John, Halifax.
 Bradley, R., & Co., Wakefield.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Browett, Lindley & Co., Ltd., Patecroft.
 Buckley & Taylor, Oldham.

Driving Engines—continued.

Calvert & Co., Huddersfield.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Combe, Barbour & Combe, Ltd., Belfast.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Donkin, Bryan, & Co., Ltd., London.
 Downham, J., & Co., Bury.
 Dryden, Thomas, Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Gimsos, Ltd., Stalybridge.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Haswell, J. Stenson, & Co., Leicester.
 Heald, John, Chorley.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brothers, Bolton.
 Jessop & Appleby Brothers (London and Leicester), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Dowall, John, & Sons, Johnstone.
 M'Kie & Baxter, Glasgow.

Driving Engines—continued.

M'Laren, J. & H., Leeds.
 McNaught, John & William, Rochdale.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mann & Charlesworth, Leeds.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Owen, Brazil & Holborow, Bristol.
 Perkin & Co., Ltd., Leeds.
 Pope, W., & Son, Ltd., London.
 Pullan & Mann, Leeds.
 Rawlinsons, Ltd (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Ross & Duncan, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsbottom.
 Shaw, Mark, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Summers & Scott, Gloucester.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Thwaites Brothers, Ltd., Bradford.
 Umpherston & Co., Ltd., Leith.
 Urnison & Thompson, Oldham.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Vauxhall Ironworks Co., Ltd., London.
 Wainwright, Thomas, & Sons, Stalybridge.

Driving Engines—continued.

Walker Brothers, Wigan.
 Walker, James, & Son, Edinburgh.
 Waller, George & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 West End Engine Works Co., Edinburgh.
 Whitaker, C. & Co., Bradford.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Dry Dock Proprietors—

Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Central Marine Engine Works, West Hartlepool.
 Deptford Dry Docks Co., Ltd., London.
 Fletcher, Son & Fearnall, Ltd., London.
 Glengall Iron Works, Ltd., London.
 Green, R. & H., Ltd., London.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Laird Brothers, Birkenhead.
 London Craving Dock Co., Ltd., London.
 Menzies & Co., Ltd., Leith.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Readhead, John, & Sons, South Shields.
 Rodger, A., & Co., Port-Glasgow.
 Scott & Co., Greenock.
 Stewart, John, & Sons, Ltd., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd. Newcastle-on-Tyne.

Drying Apparatus—

Blake, Barclay & Co., Greenock.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Holden & Brooke, Ltd., Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jefferson, Joseph, & Brothers, Bradford.
 McNaught, John & William, Rochdale.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Petrie, John, Jun., Ltd., Rochdale.
 Riley, J. H., & Co., Bury.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor, Wordsworth & Co., Leeds.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Duplex Pumps—

(See Pumps.)

Dyeing Machinery—

(See also Bleaching Machinery.)

Bentley & Jackson, Ltd., Bury.
 Berry, John, Halifax.
 Calvert & Co., Huddersfield.
 Crossley, John, & Co., Halifax.
 Downham, J., & Co., Bury.
 Dykes, G. & J., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwisle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Huddersfield.
 Kilburn, R., & Sons, Leeds.
 Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Robinson, Joseph & Co., Manchester.
 Stead Brothers, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Dynamos and Motors—

Adamson, Joseph, & Co., Hyde.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blackburn, Joseph, Nottingham.
 Broadbent, T. W., Huddersfield.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Keighley Electrical Engineering Co., Ltd., Keighley.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Company, Ltd., Taunton.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stephens, Smith & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.

Economisers—Fuel—

Bennis, Edward, & Co., Ltd., Bolton.
Donkin, Bryan, & Co., Ltd., London.
Green, E., & Sons, Ltd., Wakefield.
Meldrum Brothers, Manchester.

Ejectors—

Bailey, W. H., & Co., Ltd., Manchester.
Fletcher Brothers, Ashton-under-Lyne.
Gresham & Craven, Ltd., Manchester.
Lancaster & Tonge, Ltd., Manchester.
Ledward, T., & Co., London and Manchester.
Madan, Charles S., & Co., Manchester.
Wilkinson, Wm., & Co., Ltd., Wigan.

Electrical Engineers and Contractors—

Adamson, Daniel, & Co., Dukinfield.
Adamson, Joseph, & Co., Hyde.
Allen, W. H., Sons, & Co., Bedford.
Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
Ashton, Frost & Co., Ltd., Blackburn.
Ashwell & Nesbit, Ltd., London.
Bennis, Edward, & Co., Ltd., Bolton.
Blackburn, Joseph, Nottingham.
Broadbent, T. W., Huddersfield.
Callender's Cable and Construction Co., Ltd., London.
Charlesworth, S., & Co., Oldham.
Clarke, Chapman & Co., Ltd., Gatehead-on-Tyne.
Clarke, T. A. W., Leicester.
Clift, E. H., London.
Crompton & Co., Ltd., London and Chelmsford.
Davy Brothers, Ltd., Sheffield.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Easton, Anderson & Goolden, Ltd., Erith.
Edmondson, John A., Leeds.
Ferranti, S. Z. De, Ltd., Hollinwood.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
General Electric Co., Ltd., Manchester.
Greenwood & Batley, Ltd., Leeds.
Gwynne & Co., London.
Hall, J. P., & Co., Oldham.
Hartnell, Wilson, Leeds.
Haswell, J. Stenson, & Co., Leicester.
Henley's, W. T., Telegraph Works Co., Ltd., London.

Electrical Engineers and Contractors—*continued.*

Hodges & Todd, London.
Holliday, Read, & Sons, Ltd., Huddersfield.
Holmes, J. H., & Co., Newcastle-on-Tyne.
Jackson & Brother, Bolton.
Jackson, P. R., & Co., Ltd., Manchester.
Johnson & Phillips, Old Charlton.
Keighley Electrical Engineering Co., Ltd., Keighley.
Mavor & Coulson, Ltd., Glasgow.
Milne, James, & Son, Ltd., Edinburgh.
Newton's Electrical Co., Ltd., Taunton.
Oldham, Alex., & Sons, Dukinfield.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Parker, Thomas, Ltd., Wolverhampton.
Parsons, C. A., & Co., Newcastle-on-Tyne.
Phoenix Dynamo Manufacturing Co., Bradford.
Phosphor Bronze Co., Ltd., London.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Rosling & Appleby, Bradford.
Royce, F. H., & Co., Ltd., Manchester.
Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
Siemens Brothers & Co., Ltd., London.
Sunderland Forge and Engineering Co., Ltd., Sunderland.
Sykes, Alfred, Huddersfield.
Tate, James, Bradford.
Thwaites Brothers, Ltd., Bradford.

Electric Batteries—

Johnson & Phillips, Old Charlton.
Siemens Brothers & Co., Ltd., London.

Electric Bells and Signals—

Blackburn, Joseph, Nottingham.
Broadbent, T. W., Huddersfield.
Charlesworth, S., & Co., Oldham.
General Electric Co., Ltd., Manchester.
Haswell, J. Stenson, & Co., Leicester.
Holliday, Read, & Sons, Ltd., Huddersfield.
Jackson, P. R., & Co., Ltd., Manchester.
Mechan & Sons, Glasgow.
Siemens Brothers & Co., Ltd., London.
Sykes, Alfred, Huddersfield.
Tate, James, Bradford.

Electric Cables and Wiring—

(See Cables—Electric Lighting,
Telegraph, Telephone.)

Electric Cranes—

Adamson, Joseph, & Co., Hyde.
Ashton, Frost & Co., Ltd., Blackburn.
Berry, Henry, & Co., Leeds.
Booth, Joseph, & Brothers, Leeds.
Broadbent, Thomas, & Sons, Ltd.,
Huddersfield.
Carrick & Ritchie, Edinburgh.
Chaplin, Alex., & Co., Glasgow.
Clark, Bunnett & Co., Ltd., London
Clarke, Chapman & Co., Ltd., Gates-
head-on-Tyne.
Cowans, Sheldon & Co., Ltd., Carlisle.
Craven Brothers, Ltd., Manchester.
Crompton & Co., Ltd., London and
Chelmsford.
Dougill, Alf., & Co., Ltd., Leeds.
Edmondson, John A., Leeds.
Greenwood & Batley, Ltd., Leeds.
Grieve, John, & Co., Motherwell.
Hall, J. P., & Co., Oldham.
Henderson, John M., Aberdeen.
Higginbottom & Mannock, Man-
chester.
Holmes, J. H., & Co., Newcastle-on-
Tyne.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.
Johnson & Phillips, Old Charlton
Leeds Engineering and Hydraulic
Co., Leeds.
Marshall, Fleming & Jack, Mother-
well.
Mavor & Coulson, Ltd., Glasgow.
Parker, Thomas, Ltd., Wolverhamp-
ton.
Phoenix Dynamo Manufacturing Co.,
Bradford.
Royce, F. H., & Co., Ltd., Man-
chester.
Scott, Ernest, & Mountain, Ltd., New-
castle-on-Tyne.
Siemens Brothers & Co., Ltd., London.
Smith, Thomas, Leeds.
Stephens, Smith & Co., Ltd., London.
Stothert & Pitt, Ltd., Bath.
Tate, James, Bradford.
Vaughan & Son, Manchester.
Whitaker, C., & Co., Bradford.

**Electric Drillers—For Metal and
Stone—**

Holmes, J. H., & Co., Newcastle-on-
Tyne.
Mavor & Coulson, Ltd., Glasgow.
Muir, Wm., & Co., Ltd., Manchester.
Parker, Thomas, Ltd., Wolver-
hampton.
Rosling & Appleby, Bradford.
Siemens Brothers & Co., Ltd., London.

Electric Dynamos—

(See Dynamos and Motors.)

Electric Heating Appliances—

Crompton & Co., Ltd., London and
Chelmsford.
General Electric Co., Ltd., Man-
chester.

Electric Hoists—

Armstrong, Sir W. G., Whitworth &
Co., Ltd., Newcastle-on-Tyne.
Barker, John, & Sons, Ltd., Oldham.
Clark, Bunnett & Co., Ltd., London.
Crompton & Co., Ltd., London and
Chelmsford.
Dougill, Alf., & Co., Leeds.
Easton, Anderson & Goolden, Ltd.,
Erith.
Edmondson, John A., Leeds.
Hall, J. P., & Co., Ltd., Oldham.
Hartnell, Wilson, Leeds.
Higginbottom & Mannock, Man-
chester.
Holmes, J. H., & Co., Newcastle-on-
Tyne.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.
Mavor & Coulson, Ltd., Glasgow.
Middleton, Robert, Leeds.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Phoenix Dynamo Manufacturing Co.,
Bradford.
Richmond, Joseph, & Co., Ltd., Lon-
don.
Scott, Ernest, & Mountain, Ltd., New-
castle-on-Tyne.
Siemens Brothers & Co., Ltd., London.

Electric Light Plant and Fittings

(See also **Dynamos.**)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Bennis, Edward, & Co., Ltd., Bolton.
 Broadbent, T. W., Huddersfield.
 Burnet, Lindsay, & Co., Glasgow.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Frost & Sons, London.
 Galloways, Ltd., Manchester.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Keighley Electrical Engineering Co., Ltd., Keighley.
 M'Laren, J. & H., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Newton's Electrical Co., Ltd., Taunton.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.

Electric Light Plant and Fittings—cont.

Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.
 Thornycroft, John I., & Co., London.
 Thwaites Brothers, Ltd., Bradford.

Electric Measuring Instruments

Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.
 Hodges & Todd, London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Meters—

Ferranti, S. Z. De, Ltd., Hollinwood.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Motors—

(See **Dynamos and Motors.**)

Electric Plating and Depositing Plant—

Crompton & Co., Ltd., London and Chelmsford.
 Hall, J. P., & Co., Oldham.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Mavor & Coulson, Ltd., Glasgow.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Pumping Machinery—

Ashton, Frost & Co., Ltd., Blackburn.
 Bailey, W. H., & Co., Ltd., Manchester.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Evans, Joseph, & Sons, Wolverhampton.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton.
 Leeds Engineering and Hydraulic Co., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamic Manufacturing Co., Bradford.
 Rosling & Appleby, Bradford.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stead Brothers, Halifax.
 Thwaites Brothers, Ltd., Bradford.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Electric Search-Lights—

(See Search-Light Projectors.)

Electric Switch - Boards and Switches—

Crompton & Co., Ltd., London and Chelmsford.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Hartnell, Wilson, Leeds.

**Electric Switch-Boards and Switches—
continued.**

Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Siemens Brothers & Co., Ltd., London.

Electric Traction Plant—

Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. P., & Co., Oldham.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Johnson & Phillips, Old Charlton.
 M'Laren, J. & H., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stead Brothers, Halifax.
 Stephens, Smith & Co., Ltd., London.

Electric Transformers—

Crompton & Co., Ltd., London and Chelmsford.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Johnson & Phillips, Old Charlton.

Electric Transformers—continued.

Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Winches and Windlasses—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Easton, Anderson & Goolden, Ltd., Erith.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Rosling & Appleby, Bradford.
 Siemens Brothers & Co., Ltd., London.

Elevators and Conveyors—for Coal, Grain, Ore, etc.—

See also Conveyors and Elevators; Coal Hoists, Grain Hoists and Hoisting Machinery.)

Elevators—Passenger—

(See also Electric Hoists, Hydraulic Hoists and Hoisting Machinery.)

Arrol, Sir William, & Co., Ltd., Glasgow.
 Clark, Bunnett & Co., Ltd., London.
 Easton, Anderson & Goolden, Ltd., Erith.
 Greenwood & Batley, Ltd., Leeds.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Turner & Co., Ltd., London.
 Wren, Henry, & Co., Manchester.

Emery, Emery Wheels, etc.—

Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.

Emery Grinding Machinery—

Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dronsfeld Brothers, Ltd., Oldham.
 Glover, M., & Co., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Urmsom & Thompson, Oldham.
 Winder Brothers, Ltd., Sheffield.

Engine and Boiler Fittings—

(See also Indicators, Governors, Lubricators, Valves, Cocks, etc.)

Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Bigwood, J., & Son, Wolverhampton.
 Billington & Newton, Longport.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter, James, & Sons, Stalybridge.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Cran, John, & Co., Leith.
 Dewrance & Co., London.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eastwood, Walter, Ashton-under-Lyne.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Frost & Sons, London.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Gresham & Craven, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Kincaid, John G., & Co., Greenock.

Engine and Boiler Fittings—continued.

Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Madan, Charles S., & Co., Manchester.
 Marchant, G. M., Huddersfield.
 Marsden, Ellis, Liverpool.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Mechan & Sons, Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pease, Rhodes & Co., Ltd., Bradford.
 Saxon, George, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor, Robert, & Sons, Huddersfield.
 Thornycroft, John I., & Co., London.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Worth, Mackenzie & Co, Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Engineers' Machine Tools—

(See Machine Tools.)

Engines—

(See Air - Compressing Engines, Blowing Engines, High-Speed Engines, Driving Engines, Haulage Machinery, Locomotives, Marine Engines, Portable Engines, Pumping Engines, Rolling Mill Engines, Traction Engines, Tramway Engines, Winding Engines.)

Evaporators—

Blake, Barclay & Co., Greenock.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Rayner, London.
 Central Marine Engine Works, West Hartlepool.
 Clarke, George, Ltd., Sunderland.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Kirkaldy, John, Ltd., London.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Normandy's Patent Marine Aerated Fresh Water Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Redpath & Paris, London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Stevenson & Co., Ltd., Preston.
 Wailes, George, & Co., London.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.

Excavators—Steam—

Chaplin, Alex., & Co., Glasgow.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Rose, Downs & Thompson, Ltd., Hull.
 Stewart, John, & Son, Ltd., London.

Exhausters—

(See Blowers and Exhausters.)

Expansion Rings—

Bolton Iron and Steel Co., Ltd., Bolton.

Explosives—Machinery for Making—

Aitchison & Co., Edinburgh.
 Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. & E., Ltd., Dartford.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kincaid, John G., & Co., Greenock.
 Stevenson & Co., Ltd., Preston.
 Tatham, William, & Co., Rochdale.
 Tomlinson, James (Rochdale), Ltd.,
 Rochdale.
 Umpherston & Co., Ltd., Leith.

Extractors—

(See **Hydro Extractors, Oil Extractors.**)

Fans and Blowers—

Allen, W. H., Sons & Co., Bedford.
 Alley & Maclellan, Glasgow.
 Appleyard, Joseph, Bradford.
 Bailey & Garnett, Ltd., Stalybridge.
 Bradley, R., & Co., Wakefield.
 Brierley, Thomas, & Co., Oldham.
 Bumsted & Chandler, Hednesford.
 Campbell & Calderwood, Paisley.
 Crompton & Co., Ltd., London and
 Chelmsford.
 Daglish, Robert, & Co., St. Helens.
 Davis & Co., Ltd., London.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Entwisle & Gass, Ltd., Bolton.
 Goodwin, Arnold, & Son, London.
 Greenock Foundry Co., Greenock.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Howden, James, & Co., Glasgow.
 Larmuth, Thomas, & Co., Manchester.
 M'Kie & Baxter, Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Marsden, John, & Son, Liverpool.
 Meldrum Brothers, Manchester.
 Redpath & Paris, London.
 Siemens Brothers & Co., Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Walker Brothers, Wigan.
 Watson, Henry, & Sons, Newcastle-
 on-Tyne.
 Worsley Mesnes Iron Works Co.,
 Wigan.

Feed-Cheek Valves—

Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Bailey, W. H., & Co., Ltd., Man-
 chester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Carruthers, J. H., & Co., Glasgow.
 Carter, James, & Sons, Stalybridge.
 Cockburn, David, Glasgow.
 Dewrance & Co., London.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Galloways, Ltd., Manchester.
 Hall, John, & Son, Oldham.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Moorhouse, Walter, & Co., Staly-
 bridge.
 Oldham Boiler Works Co., Ltd.,
 Oldham.
 Palmer's Shipbuilding and Iron Co.,
 Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Schofield & Taylor, Huddersfield.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thornycroft, John I., & Co., London.
 Turnbull, Alexander, & Co., Glasgow.
 Weir, G. & J., Ltd., Glasgow.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.

Feed-Water Filters—

Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.
 Blake, Barclay & Co., Greenock.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 North-Eastern Marine Engineering
 Co., Ltd., Wallsend-on-Tyne and
 Sunderland.
 Pulsometer Engineering Co., Ltd.,
 London.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-
 on-Tyne.

Feed-Water Heaters—

Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Rayner, London.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Cole, T. & W., London.
 Crook, Thomas T., Bolton.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Haigh, W. B., & Co., Oldham.
 Hanna, Donald & Wilson, Paisley.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Normandy's Patent Marine Aërated Fresh Water Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Schofield & Taylor, Huddersfield.
 Storey, Isaac, & Sons, Manchester.
 Thornton & Crebbin, Bradford.
 Turnbull, Alexander, & Co., Glasgow.
 Wailes, George, & Co., London.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd. Stockton-on-Tees.

Feed-Water Pumps—

(See Pumps.)

Feed-Water Regulators—

(See Feed Check Valves.)

Felt Machinery—

Bywater, William, Leeds.
 Ritchie, Hart & Co., Ltd., Belfast.
 Taylor, Wordsworth & Co., Leeds.

Fencing and Railings—Iron—

Bailey & Garnett, Ltd., Stalybridge.
 Crumblehulme, W., & Sons, Ltd., Bolton.
 Tonkinson, Henry, & Sons, Sunderland.

File Cutting and Grinding Machinery—

Foster, Joseph, & Sons, Preston.
 Greenwood & Batley, Ltd., Leeds.
 Oxley Brothers, Ltd., Sheffield.

File Makers—

Allen, Edgar, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Turton, George, Platts & Co., Sheffield.

Filtering Apparatus—

Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., London.
 Blake, Barclay & Co., Greenock.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Greenock Foundry Co., Greenock.
 Haigh, W. B., & Co., Oldham.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Kerr, Stuart & Co. Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Masson, Scott & Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pulsometer Engineering Co., Ltd., London.
 Rose, Downs & Thompson, Ltd., Hull.

Filtering Apparatus—continued.

Strang, Joseph, Ltd., Ramsbottom.
Thwaites Brothers, Ltd., Bradford.
Turnbull, Alexander, & Co., Glasgow.
Watson, Henry, & Sons, Newcastle-on-Tyne.

Filter Presses—

Ashton, Frost & Co., Ltd., Blackburn.
Crow, Harvey & Co., Glasgow.
Daglish, Robert, & Co., St. Helens.
Fawcett, Preston & Co., Ltd., Liverpool.
Gimson & Co. (Leicester), Ltd., Leicester.
Greenwood & Ratley, Ltd., Leeds.
Holliday, Read, & Sons, Ltd., Huddersfield.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
M'Neil, John, & Co., Glasgow.
Manlove, Alliott & Co., Ltd., Nottingham.
Rose, Downs & Thompson, Ltd., Hull.
Strang, Joseph, Ltd., Ramsbottom.

Filters—

(See Filtering Apparatus, Feed-Water Filters, Oil Filters.)

Fire Bars—

Adamson, Daniel, & Co., Dukinfield.
Aitchison & Co., Edinburgh.
Bennis, Edward, & Co., Ltd., Bolton.
Black, William, South Shields.
Brightside Foundry Co., Ltd., Sheffield.
Burnet, Lindsay, & Co., Glasgow.
Carter, James, & Sons, Stalybridge.
Central Marine Engine Works, West Hartlepool.
Cran, John, & Co., Leith.
Death & Harris, Leicester.
Douglas Forge Co., Ltd., Wigan.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Edie, Henry, & Co., London.
Fraser, Douglas, & Sons, Arbroath.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.

Fire Bars—continued.

Galloways, Ltd., Manchester.
Gimson & Co. (Leicester), Ltd., Leicester.
Ginnman & Son, Plumstead.
Haigh, W. B., & Co., Oldham.
Hall, John, & Son, Oldham.
Hanna, Donald & Wilson, Paisley.
Hawthorns & Co., Ltd., Leith.
Heald, John, Chorley.
Henderson, D. & W., & Co., Glasgow.
Jones, John, & Sons, Liverpool.
Kincaid, John G., & Co., Greenock.
Meldrum Brothers, Manchester.
Musgrave, John, & Son, Ltd., Bolton.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Oldham Boiler Works Co., Ltd., Oldham.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Richardson, Tuer & Co., Manchester.
Stevenson & Co., Ltd., Preston.
Stewart, John, & Son, Ltd., London.
Strang, Joseph, Ltd., Ramsbottom.
White, W. B., Colne.
Wilkinson, Wm., & Co., Ltd., Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Yates & Thom, Blackburn.

Fire - Extinguishing Appliances—

Beck & Co., Ltd., London.
Blundell's London Copper and Brass Works, Ltd., London.
Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
Lambeth Brass and Iron Co., Ltd., London.
Stone, J., & Co., London.
Walker, Samuel, Manchester.
Woods, Hamilton, & Co., Ltd., Manchester.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Firewood-Making Machinery—

Glover, M., & Co., Leeds.

Flanged Plates for Boilers, Locomotives, etc.—

Adamson, Daniel, & Co., Dukinfield.
Adamson, Joseph, & Co., Hyde.
Beeley, Thomas, Hyde.
Brown, John, & Co., Ltd., Sheffield.
Burnet, Lindsay, & Co., Glasgow.
Davy Brothers, Ltd., Sheffield.
Galloways, Ltd., Manchester.
Greenock Foundry Co., Greenock.
Lees, Anderson & Co., Glasgow.
M'Laren, J. & H., Leeds.
Stephenson, Robert, & Co., Ltd.,
Newcastle-on-Tyne.

Flanging Machines—

Arrol, Sir William, & Co., Ltd.,
Glasgow.
Bennie, James, & Sons, Glasgow.
Berry, Henry, & Co., Leeds.
Craig & Donald, Johnstone.
Crow, Harvey & Co., Glasgow.
Fielding & Platt, Ltd., Gloucester.
Hetherington, John, & Sons, Ltd.,
Manchester.
Muir, Wm., & Co., Ltd., Manchester.
Scriven & Co., Leeds.
Smith, Hugh, & Co., Glasgow.

Flannelette - Finishing Machinery—

Bentley & Jackson, Ltd., Bury.
Downham, J., & Co., Bury.
Edmeston, Archd., & Sons, Man-
chester.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Jackson & Brother, Bolton.
Kenworthy, Royston & Co., Hudders-
field.
Riley, J. H., & Co., Bury.
Walker, Samuel, Manchester.

Flax, Hemp and Jute Machinery—

Combe, Barbour & Combe, Ltd.,
Belfast.
Cotton, Stephen, & Co., Belfast.
Craig, A. F., & Co., Ltd., Paisley.
Curtis, Sons & Co., Manchester.

Flax, Hemp and Jute Machinery— *continued.*

Fairbairn, Naylor, Macpherson & Co.,
Ltd., Leeds.
Fraser, Douglas, & Sons, Arbroath.
Hacking & Co., Bury.
Harding, Richardson, Rhodes & Co.,
Ltd., Leeds.
Hetherington, John, & Sons, Ltd.,
Manchester.
Horner, George, Belfast.
Houston & Hamilton, Belfast.
Lawson, Samuel, & Sons, Leeds.
Lee, Croll & Co., Lochee.
Low, James F., & Co., Monifieth.
Nasymth, Wilson & Co., Ltd., Man-
chester.
Parker, Charles, Sons & Co., Dundee.
Robertson & Orchar, Ltd., Dundee.
Taylor, Wordsworth & Co., Leeds.
Thomson, Son & Co., Dundee.
Urquhart, Lindsay & Co., Dundee.

Floor-Cloth Machinery—

(See Linoleum Machinery, also Floor
Cloths, under Printing Machinery.)

Flour-Mill Machinery—

Foster, Joseph, & Sons, Preston.
Fullerton, Hodgart & Barclay, Ltd.,
Paisley.
Hind & Lund, Ltd., Preston.
Mather, Alex., & Son, Edinburgh.
Moore, James, & Sons, Ltd., Belfast.
Tomlinson, James (Rochdale), Ltd.,
Rochdale.

Fly Wheels—

(See Mill Gearing, Shafting and Shaft
Fittings.)

Folding or Plaiting Machinery—

Butterworth & Dickinson, Burnley.
Foster, Joseph, & Sons, Preston.
Hacking & Co., Bury.
Hattersley, George, & Sons, Ltd.,
Keighley.
Riley, J. H., & Co., Bury.
White, W. B., Colne.

Forced and Induced Draught Apparatus—

Alley & Maclellan, Glasgow.
 Bennis, Edward, & Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Bumsted & Chandler, Hedgesford.
 Burnet, Lindsay, & Co., Glasgow.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Gwynne & Co., London.
 Haigh, W. B., & Co., Oldham.
 Hanna, Donald & Wilson, Paisley.
 Howden, James, & Co., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 Ledward, T., & Co., London and Manchester.
 McKie & Baxter, Glasgow.
 Meldrum Brothers, Manchester.
 Redpath & Paris, London.
 Thwaites Brothers, Ltd., Bradford.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Forges—Portable —

(See Hearths—Portable.)

Forging Presses and Plant—

(See also Hammers—Steam.)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Craven Brothers, Ltd., Manchester.
 Davis & Primrose, Leith.
 Davy Brothers, Ltd., Sheffield.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Middleton, Robert, Leeds.
 Rice & Co., Leeds.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Saxon, George, Manchester.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, Hugh, & Co., Glasgow.
 Thwaites Brothers, Ltd., Bradford.

Forgings—Iron and Steel—

(See also Anchors, Shafting—Marine, Crank Shafts.)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Darlington Forge Co., Ltd., Darlington.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenock Foundry Co., Greenock.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Kirkstall Forge Co., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Reay & Usher, Sunderland.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Schofield & Taylor, Huddersfield.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Strang, Joseph, Ltd., Rams.

Forgings—Iron and Steel—continued.

Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.
 Walker Brothers, Wigan.
 White, W. B., Colne.
 Woodhouse & Rixson, Sheffield.

Founders—

(See Aluminium Founders, Brass and Bronze Founders, Iron and Steel Founders.)

Foundry Plant and Appliances—

(See Cupolas, Cranes, Crucibles, Sand-Moulding Machines, Wheel-Moulding Machines.)

Friction Clutches—

Blackburn, George, & Sons, Ltd., Nottingham.
 Bradley, R., & Co., Wakefield.
 Daglish, Robert, & Co., St. Helens.
 Dryden, Thomas, Preston.
 Edmeston, Archd., & Sons, Manchester.
 Entwisle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser & Chalmers, Ltd., London.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Harpers, Ltd., Aberdeen.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Moore & Korte, Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nottingham Engineering Co., Ltd., Nottingham.
 Pope, W., & Son, Ltd., London.
 Qualter, Hall & Co., Barnsley.
 Riley, J. H., & Co., Bury.
 Stead Brothers, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Unbreakable Pulley and Mill-gearing Co., Ltd., Manchester.
 Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Whitaker, C., & Co., Bradford.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.

Furnace Blowing Engines and Plant—

(See Blowing Engines and Plant.)

Furnaces—Boiler—

(See Boiler Furnaces.)

Furnaces—Smelting, Annealing, Case-hardening, etc.—

Fletcher Brothers, Ashton-under-Lyne.
 Fraser & Chalmers, Ltd., London.
 Hamer, S. H., Halifax.
 Holroyd, John, & Co., Ltd., Rochdale.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Oxley Brothers, Ltd., Sheffield.
 Thwaites Brothers, Ltd., Bradford.

Galvanising Plant—

Bigwood, J., & Sons, Wolverhampton.
 Bridges, Thomas, & Sons, Wolverhampton.

Gas Compressors—

(See Air-Compressors.)

Gas Cylinders—

(See Cylinders for Gas and Air.)

Gas Engines—

Andrew, J. E. H., & Co., Ltd., Reddish.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Cole, T. & W., London.
 Dewhurst, C. H., Keighley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dykes, G. & J., Bury.
 Fielding & Platt, Ltd., Gloucester.
 Furnival & Co., Manchester.
 Green, Thomas, & Son, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hill, F. J., Leicester.

Gas Engines—*continued.*

Keighley Engineering Co., Keighley.
National Gas Engine Co., Ltd., Ashton-under-Lyne.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Perkin & Co., Ltd., Leeds.
Spetch & Thomas, Bradford.
Unbreakable Pulley and Mill-gearing Co., Ltd., Manchester.

Gas Exhausters—

(*See Blowers and Exhausters.*)

Gas Holders—

(*See Gas Works Plant.*)

Gas Meters—

Milne, James, & Son, Ltd., Edinburgh.

Gas Pipes—

(*See Pipes.*)

Gas Producers—

Calvert & Co., Huddersfield.
Dougill, Alf., & Co., Ltd., Leeds.
Fielding & Platt, Ltd., Gloucester.
Fraser, John, & Son, London.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
Galloways, Ltd., Manchester.
Hanna, Donald & Wilson, Paisley.
Mechan & Sons, Glasgow.
Meldrum Brothers, Manchester.
Pope, W., & Son, Ltd., London.
Stevenson & Co., Ltd., Preston.
West's Gas Improvement Co., Ltd., Manchester.

Gas Works Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Arrol, Sir William, & Co., Ltd., Glasgow.
Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.

Gas Works Plant—*continued.*

Clayton, Son & Co., Ltd., Leeds.
Craig, A. F., & Co., Ltd., Paisley.
Donkin, Bryan, & Co., Ltd., London.
Douglas Forge Co., Ltd., Wigan.
Goodwin, Arnold, & Son, London.
Gwynne & Co., London.
Hall, John, & Son, Oldham.
Hanna, Donald & Wilson, Paisley.
Harrison & Hammond, Wakefield.
Hunter & English, London.
M'Kinnon, William, & Co., Aberdeen.
Mechan & Sons, Glasgow.
Meldrum Brothers, Manchester.
Milne, James, & Son, Ltd., Edinburgh.
Pope, W., & Son, Ltd., London.
Stevenson & Co., Ltd., Preston.
Wailles, George, & Co., London.
Waller, George, & Co., Stroud.
West's Gas Improvement Co., Ltd., Manchester.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Gauge Cocks—

(*See Valves and Cocks.*)

Gauges—Pressure—

Bailey, W. H., & Co., Ltd., Manchester.
Baldwin, James, Keighley.
Billington & Newton, Longport.
Carter, James, & Son, Stalybridge.
Dewrance & Co., London.
Feather, George R., Bolton.
Fletcher Brothers, Ashton-under-Lyne.
Frost & Sons, London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Meadowcroft, C. H., & Brother, Dukinfield.
Moorhouse, Sydney, & Co., Stalybridge.
Moorhouse, Walter, & Co., Stalybridge.
Morton & Edwards, Stalybridge.
Pease, Rhodes & Co., Ltd., Bradford.
Storey, Isaac, & Sons, Manchester.

Gauges—Water—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Carter, James, & Sons, Stalybridge.
 Dewrance & Co., London.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Storey, Isaac, & Sons, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Gear Cutting Machines—

(See Wheel-Cutting Machines.)

Gearing—Mill—

(See Mill Gearing and Shafting.)

Gear Wheels—

(See Mill Gearing, Shafting and Shaft Fittings.)

Girders—Built and Rolled—

(See Bridges, Roofs, and Structural Iron and Steel Work.)

Glass-Working Plant—

Daglish, Robert, & Co., St. Helens.
 Entwisle & Gass, Ltd., Bolton.
 Greenwood & Batley, Ltd., Leeds.
 Stevenson & Co. Ltd., Preston.

Gold Crushing and Amalgamating Machinery—

Brightside Foundry Co., Ltd., Sheffield.
 Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser & Chalmers, Ltd., London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.

Goliath and Titan Cranes—

Carriek & Ritchie, Edinburgh.
 Chaplin, Alex., & Co., Glasgow.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Booth, Joseph, & Brothers, Leeds.
 Henderson, John M., Aberdeen.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Smith, Thomas, Leeds.
 Stothert & Pitt, Ltd., Bath.

Governors—Stationary Engine—

Arundel & Co., Stockport.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co. Ltd., Patricroft.
 Carmichael, James, & Co., Ltd., Dundee.
 Evans, Joseph, & Sons, Wolverhampton.
 Galloways, Ltd., Manchester.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 M'Laren, J. & H., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramisbottom.
 Storey, Isaac, & Sons, Manchester.
 Whitley Partners, Leeds.
 Wood, John & Edward, Bolton.

Governors—Marine Engine—

Grabs—

(See Dredgers and Dredge Plant.)

Grain Hoists—

Bennis, Edward & Co., Ltd., Bolton
Fraser & Chalmers, Ltd., London.
Haigh, W. B., & Co., Oldham.
Hind & Lund, Ltd., Preston.
Milne, James, & Son, Ltd., Edinburgh.
Rose, Downs & Thompson, Ltd.,
Hull.
Stevenson & Co., Ltd., Preston.

Granite-Working Machinery—

(See Stone-Working Machinery.)

Graving Dock Proprietors—

(See Dry-Dock Proprietors.)

Grinding Mills—

Barry, Henry, & Co., Ltd., Aberdeen.
Berry, John, Halifax.
Charlesworth, S., & Co., Oldham.
Clayton, Howlett & Co., London.
Crook, Thomas T., Bolton.
Daglish, Robert, & Co., St. Helens.
Douglas Forge Co., Ltd., Wigan.
Fraser & Chalmers, Ltd., London.
Good & Menzies, Ltd., Hull.
Henderson, John M., Aberdeen.
Hind & Lund, Ltd., Preston.
Johnson, William, & Sons, Leeds.
Kenworthy, Taylor & Co., Barnsley.
Mann, G., & Co., Leeds.
Middleton, Robert, Leeds.
Oxley Brothers, Ltd., Sheffield.
Pullan & Mann, Leeds.
St. George's Ironworks, Ltd., Man-
chester.
Shepherd, Hill & Co., Ltd., Leeds.
Stevenson & Co., Ltd., Preston.

Grinding and Polishing Machinery—

(See also Emery-Grinding Machinery.)

Birch, G., & Co., Manchester.
Bolton Engineering Co., Bolton.
Crookes, Roberts & Co., Sheffield
Darling & Sellers, Ltd., Keighley.
Dickinson, John, & Co., Keighley
Dronsfield Brothers, Ltd., Oldham.
Glover, M., & Co., Leeds.
Henderson, John M., Aberdeen.
Hodgson, H. E., & Co. Cleckheaton.
Holroyd, John, & Co., Ltd., Rochdale.
Luke & Spencer, Ltd., Manchester.
Oxley Brothers, Ltd., Sheffield.
Urmson & Thompson, Oldham.
White, W. B., Colne.
Winder Brothers., Ltd., Sheffield.

Guillotines— for Paper Cutting —

(See Bookbinders' Machinery.)

Gun-Making Machinery—

(See Ordnance Machinery and Small Arms Machinery.)

Gunpowder, etc., Machinery—

(See Explosives—Machinery for Making.)

Guns, Gun Carriages and Mountings—

(See Ordnance—Makers of.)

Guttapercha Machinery—

(See Rubber Mill Machinery.)

Hammers—Steam and Pneumatic—

Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Brightside Foundry Co., Ltd., Sheffield.
 Clarke, T. A. W., Leicester.
 Crow, Harvey & Co., Glasgow.
 Davis & Prinrose, Leith.
 Davy Brothers, Ltd., Sheffield.
 Dickinson, John, & Co., Keighley.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Greenwood & Batley, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hulse & Co., Ltd., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Pratt F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ross, R. G., & Son, Glasgow.
 Scriven & Co., Leeds.
 Smith, Daniel, & Co., Wolverhampton.
 Thwaites Brothers, Ltd., Manchester.
 Urmson & Thompson, Oldham.
 Walker Brothers, Wigan.
 Worsley Mesnes Iron Works Co., Wigan.

Haulage Machinery and Appliances—

Ashton, Frost & Co., Ltd., Blackburn.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Booth, Joseph, & Brothers, Leeds.
 Bradley, R., & Co., Wakefield.
 Chaplin, Alex., & Co., Glasgow.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Douglas Forge Co., Ltd., Wigan.
 Fleming & Ferguson, Ltd., Paisley.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Heald, John, Chorley.
 Henderson, John M., Aberdeen.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Lancaster & Tonge, Ltd., Manchester.

**Haulage Machinery and Appliances—
*continued.***

Leeds Engineering and Hydraulic Co., Leeds.
 Needham Brothers & Brown, Barnsley.
 Qualter, Hall & Co., Barnsley.
 Stead Brothers, Halifax.
 Walker Brothers, Wigan.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Worsley Mesnes Ironworks Co., Wigan.
 Yates & Thom, Blackburn.

Hearths—Portable—*(See also Smiths' Hearths.)*

Fraser, Douglas, & Sons, Arbroath.
 Oxley Brothers, Ltd., Sheffield.
 Thwaites Brothers, Ltd., Bradford.

Heating and Ventilating Apparatus—

Ashwell & Nesbit, Ltd., London and Leicester.
 Calvert & Co., Huddersfield.
 Crumblehulme, W., & Sons, Ltd., Bolton.
 Dougill, Alf., & Co., Ltd., Leeds.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hayward Brothers & Eckstein, Ltd., London.
 Ledward, T., & Co., Manchester.
 Marsden, John, & Son, Liverpool.
 Newsum, Roberts & Co., Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Pease, Rhodes & Co., Ltd., Bradford.
 Simpson, James, & Co., Ltd., London.
 Turner & Co., London.
 Utley, Thomas, & Co., Liverpool.

Hemp Machinery—*(See Flax, Hemp and Jute Machinery.)*

High-Speed Engines—

Adamson, Daniel, & Co., Dukinfield.
 Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co., Ltd., Patri-
 croft.
 Bumsted & Chandler, Hednesford.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coulthard, T., & Co., Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd.
 Erith.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Fraser, Douglas, & Sons, Arbroath.
 Gallways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Gwynne & Co., London.
 Hall, J. P., & Co., Oldham.
 Howden, James, & Co. Glasgow.
 Lancaster & Tonge, Ltd., Manchester.
 M'Laren, J. & H., Leeds.
 Marshall, Sons & Co., Ltd., Gains-
 borough.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Owen, Brazil & Holborow, Bristol.
 Redpath & Paris, London.
 Riley, J. F., Huddersfield.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott, Ernest, & Mountain, Ltd.,
 Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Rams-
 bottom.
 Smith, A. & D., & Co., London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Vauxhall Ironworks Co., Ltd., Lon-
 don.
 Wailes, George, & Co., London.
 Walmsley, Charles, & Co., Ltd., Bury.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.

Hoisting Machinery—

(See also Ash Hoists, Coal Hoists,
 Electric Hoists, Grain Hoists,
 Hydraulic Hoists, Elevators, Con-
 veyors.)

Alley & Maclellan, Glasgow.
 Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Newcastle-on-Tyne.
 Arrol, Sir William, & Co., Ltd,
 Glasgow.
 Ashwell & Nesbit, Ltd., London and
 Leicester.
 Barker, John, & Sons, Ltd., Oldham.
 Benham & Sons, Ltd., London.
 Bennis, Edward, & Co., Ltd., Bolton.
 Berry, Henry, & Co., Leeds.
 Berry, John, Halifax.
 Bigwood, J., & Son, Wolverhampton.
 Blake, Barclay & Co., Greenock.
 Booth, Joseph, & Brothers, Leeds.
 Brown Brothers & Co., Ltd., Edin-
 burgh.
 Calvert & Co., Huddersfield,
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bunnnett & Co., Ltd., London.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cole, T. & W., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Daglish, Robert, & Co., St. Helens.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Gadd, Thomas (Hulse & Co., Ltd,
 Proprietors), Manchester.
 Gimson & Co. (Leicester), Ltd.,
 Leicester.
 Good & Menzies, Ltd., Hull.
 Greenwood & Batley, Ltd., Leeds.
 Grieve, John, & Co., Motherwell.
 Haigh, W. B., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Henderson, John M., Aberdeen.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Higginbottom & Mannock, Man-
 chester.

Holsting Machinery—continued.

Hind & Lund, Ltd., Preston.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Larmuth, Thomas, & Co., Manchester.
 Lee, Croll & Co., Lochee.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Mavor & Coulson, Ltd., Glasgow.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Perkin & Co., Ltd., Leeds.
 Pickerings, Ltd., Stockton-on-Tees.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Riley, J. F., Huddersfield.
 Roger, R., & Co., Stockton-on-Tees.
 Rose, Downs & Thompson, Ltd., Hull.
 Ross, R. G., & Son, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Schofield & Taylor, Huddersfield.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor & Hubbard, Leicester.
 Thomson, Son & Co., Dundee.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Waller, George, & Co., Stroud.
 Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 West's Gas Improvement Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hosiery Machinery—

Blackburn, George, & Sons, Ltd., Nottingham.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hague, B., & Co., Nottingham.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hosiery Machine Building Co., Nottingham.
 Kiddier Brothers, Nottingham.
 Kiddier, J., & Son, Nottingham.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Pegg, Samuel, & Son, Leicester.
 Taylor, Wordsworth & Co., Leeds.
 Wren, Henry, & Co., Manchester.

Hydraulic Accumulators—

(See Hydraulic Machinery and Appliances.)

Hydraulic Bending Machines—

(See Bending Machines and Rolls.)

Hydraulic Capstans—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Carrick & Wardale, Gateshead-on-Tyne.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Rice & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Hydraulic Cranes—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Berry, Henry, & Co., Leeds.
 Booth, Joseph, & Brothers, Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Campbell & Caklerwood, Paisley.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bunnett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fullarton, Hodgart & Barclay, Ltd., Paisley.
 Grieve, John, & Co., Motherwell.
 Hanna, Donald & Wilson, Paisley.
 Higginbottom & Mannock, Manchester.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Leeds Engineering and Hydraulic Co., Leeds.
 McNeil, John, & Co., Glasgow.
 Middleton, Robert, Leeds.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Stothert & Pitt, Ltd., Bath.
 Whitaker, C., & Co., Bradford.
 Wren, Henry, & Co., Manchester.

Hydraulic Flangers—

(See Flanging Machines.)

Hydraulic Hoists—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Barker, John, & Sons, Ltd., Oldham.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clark, Bunnett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craig, A. F., & Co., Ltd., Paisley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fullerton, Ho'gart & Barclay, Ltd., Paisley.
 Goodwin, Arnold, & Son, London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Higginbottom & Mannock, Manchester.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Lee, Croll & Co., Lochee.
 Leeds Engineering and Hydraulic Co., Leeds.
 Mathews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave Brothers, Leeds.
 Olroyd, Edwin, & Co., Ltd., Leeds.
 Pickerings, Ltd., Stockton-on-Tees.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stevenson & Co., Ltd., Preston.
 Thomson, Son & Co., Dundee.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Whittaker, C., & Co., Bradford.
 Wren, Henry, & Co., Manchester.

Hydraulic Jacks—

Adamson, Daniel, & Co., Dukinfield.
 Berry, Henry, & Co., Leeds.
 Fielding & Platt, Ltd., Gloucester.

Hydraulic Machinery and Appliances—

*See also Hydraulic Cranes, Hydra-
 Capstans, Hydra. Hoists, Hydra.
 Jacks, Hydra. Presses, Hydra.
 Pumps, Hydra. Rivetters.)*

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashwell & Nesbit, Ltd., London.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Cameron, John, Manchester.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bunnett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Crossley, John, & Co., Halifax.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Dougill, Alf, & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Eltringham, J. T., & Co., South Shields.
 Evans, Joseph, & Sons, Wolverhampton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Galloways, Ltd., Manchester.

Hydraulic Machinery and Appliances—continued.

Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Greenwood & Batley, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hathorn, Davey & Co., Leeds.
 Higginbottom & Mannock, Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton.
 Kenworthy, Royston & Co., Huddersfield.
 Lambeth Brass and Iron Co., Ltd., London.
 Lee, Croll & Co., Lochee.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pickerings, Ltd., Stockton-on-Tees.
 Pulsometer Engineering Co. Ltd., London.
 Qualter, Hall & Co., Barnsley.
 Rice & Co., Leeds.
 St. George's Ironworks, Ltd., Manchester.
 Scriven & Co., Leeds.
 Simpson, James, & Co., Ltd., London.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stone, J., & Co., London.
 Thomson, Son, & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tomlinson, G. W., Huddersfield.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.

Hydraulic Machinery and Appliances
—continued.

Walker, Samuel, Manchester.
Waller, George, & Co., Stroud.
Walmsley, Charles, & Co., Ltd., Bury.
Ward & Haggas, Keighley.
Waygood, R., & Co., Ltd., London.
West End Engine Works Co., Edinburgh.
Woods, Hamilton, & Co., Ltd., Manchester.
Wren, Henry, & Co., Manchester. *

Hydraulic Presses—

(See also **Forging Presses and Presses**
—Steam and Screw.)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Armstrong Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Arrol, Sir William, & Co., Ltd., Glasgow.
Bailey, W. H., & Co., Ltd., Manchester.
Berry, Henry, & Co., Leeds.
Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
Brown Brothers & Co., Ltd., Edinburgh.
Butterworth & Dickinson, Burnley.
Carmichael, James, & Co., Ltd., Dundee.
Carruthers, J. H., & Co., Glasgow.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Coates, Victor, & Co., Ltd., Belfast.
Cowen, G. R., & Co., Nottingham.
Crossley, John, & Co., Halifax.
Crow, Harvey & Co., Glasgow.
Death & Harris, Leicester.
Dougill, Alf., & Co., Ltd., Leeds.
Downham, J., & Co., Bury.
Drysdale & Co., Glasgow.
Easton, Anderson & Goolden, Ltd., Erith.
Eltringham, J. T., & Co., South Shields.
Farmer, Sir James, & Sons, Ltd., Manchester.
Fawcett, Preston & Co., Ltd., Liverpool.
Fiedling & Platt, Ltd., Gloucester.
Firth, Thomas, & Sons, Ltd., Sheffield.
Fraser, Douglas, & Sons, Arbroath.

Hydraulic Presses—continued.

Fullerton, Hodgart & Barclay, Ltd., Paisley.
Galloways, Ltd., Manchester.
Good & Menzies, Ltd., Hull.
Goodwin, Arnold, & Son, London.
Greenwood & Batley, Ltd., Leeds.
Hacking & Co., Bury.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
Houston & Hamilton, Belfast.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Hulse & Co., Ltd., Manchester.
Hunter & English, London.
Jackson & Brother, Bolton.
Jackson, P. R., & Co., Ltd., Manchester.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kenworthy, Royston & Co., Huddersfield.
Kincaid, John G., & Co., Greenock.
Lancaster & Tonge, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
M'Neil, John, & Co., Glasgow.
Manlove, Alliot & Co., Ltd., Nottingham.
Mather, Alex., & Son, Edinburgh.
Middleton, Robert, Leeds.
Moreland, Richard, & Son, Ltd., London.
Muir, Wm., & Co., Ltd., Manchester.
Musgrave Brothers, Leeds.
Nasmyth, Wilson & Co., Ltd., Manchester.
Perkin & Co., Ltd., Leeds.
Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
Rice & Co., Leeds.
Richmond, Joseph, & Co., Ltd., London.
Riley, J. H., & Co., Bury.
Robertson & Orchar, Ltd., Dundee.
Robinson, Joseph, & Co., Manchester.
Rose, Downs & Thompson, Ltd., Hull.
St. George's Ironworks, Ltd., Manchester.
Scriven & Co., Leeds.
Smith, Hugh, & Co., Glasgow.
Stead Brothers, Halifax.
Stevenson & Co., Ltd., Preston.
Strang, Joseph, Ltd., Ramsbottom.
Thomson, Son & Co., Dundee.
Thornton & Crebbin, Bradford.
Tomlinson, G. W., Huddersfield.
Umpherston & Co., Ltd., Leith.
Walker, Samuel, Manchester.
Ward & Haggas, Keighley.

Hydraulic Presses—continued.

Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 White, W. B., Colne.
 Whitaker, C., & Co., Bradford.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hydraulic Pumps—

(See Pumps and Pumping Engines.)

Hydraulic Punching Machines—

(See Punching and Shearing Machines.)

Hydraulic Rams—

(See Hydraulic Machinery and Appliances.)

Hydraulic Riveting Machines—

(See also Riveting Machines.)

Arrol, Sir William, & Co., Ltd., Glasgow.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Crow, Harvey & Co., Glasgow.
 Fielding & Platt, Gloucester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Muir, Wm., & Co., Ltd., Manchester.
 Musgrave Brothers, Leeds.
 Rice & Co., Leeds.
 Scriven & Co., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.

Hydraulic Valves—

(See Sluice-Valves, Cocks and Hydrants; also Valves and Cocks.)

Hydro Extractors—

Blake, Barclay & Co., Greenock.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Crossley, John, & Co., Halifax.
 Campbell & Calderwood, Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Larmuth, Thomas, & Co., Manchester.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Riley, J. H., & Co., Bury.
 Urnson & Thompson, Oldham.

Hydrokineters—

Lees, Anderson & Co., Glasgow.
 Weir, G. & J., Ltd., Glasgow.

Ice-Making and Refrigerating Machinery—

(See also Refrigerating Machinery.)

Cole, T. & W., London.
 Hall, J. & E., Ltd., Dartford.
 Pulsometer Engineering Co., Ltd., London.

India-Rubber Making Machinery—

(See Rubber-Mill Machinery.)

Indicators—Engine—

Arundel & Co., Stockport.
 Bailey, W. H., & Co., Ltd., Manchester.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 Storey, Isaac, & Sons, Manchester.

Ingot Moulds—

Brightside Foundry Co., Ltd., Sheffield.
 Denison, Samuel, & Son, Leeds.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Fowler, John, Sheffield.
 Fraser & Chalmers, Ltd., London.
 Oxley Brothers, Ltd., Sheffield.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Winder Brothers, Ltd., Sheffield.

Ingots—

Bolton Iron and Steel Co., Ltd., Bolton.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Jackson, P. R., & Co., Ltd., Manchester.
 Fox, Samuel, & Co., Sheffield.
 Palmer's Shipbuilding and Iron Co. Ltd., Jarrow-on-Tyne.

Injectors—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Dewrance & Co., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Holden & Brooke, Ltd., Manchester.
 Lancaster & Tonge, Ltd., Manchester.
 Madan, Charles S., & Co., Manchester.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pope, W., & Son, Ltd., London.

Iron and Steel Forgings—

(See Forgings—Iron and Steel.)

Iron and Steel Founders—

Iron Founders—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Allsup & Co., Ltd., Preston.
 Arundel & Co., Stockport.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Blackburn.
 Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Bailey & Garnett, Ltd., Stalybridge.
 Barraclough, Joseph, & Sons, Barnsley.
 Barrett, R., & Son, Ltd., London.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Beck & Co., Ltd., London.
 Berry, Henry, & Co., Leeds.
 Berry, John, Halifax.
 Bigwood, J., & Sons, Wolverhampton.
 Black, William, South Shields.
 Blair & Co., Ltd., Stockton-on-Tees.
 Booth, Joseph, & Brothers, Leeds.
 Bow, M'Lachlan & Co., Paisley.
 Bradley, R., & Co., Wakefield.
 Brightside Foundry Co., Ltd., Sheffield.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Butler, J., & Co., Halifax.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Calvert & Co., Huddersfield.
 Calvert, T. C., Sunderland.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carter, James, & Sons, Stalybridge.
 Central Marine Engine Works, West Hartlepool.
 Chadwick, James, Bolton.
 Chapman, Carverhill & Co., Newcastle-on-Tyne.
 Clark, J. & T., Bradford.
 Clark, T. A. W., Leicester.
 Clayton, Howlett & Co., London.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cowen, G. R. & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Crossley George, Ltd., Cleckheaton.

Iron and Steel Founders—cont.**Iron Founders—continued.**

Crumblehulme, W., & Sons, Ltd., Bolton.
 Daglish, Robert, & Co., St Helens.
 Darling & Sellers, Ltd., Keighley.
 Death & Harris, Leicester.
 Denison, Samuel, & Son, Leeds.
 Dickinson, John, & Co., Keighley.
 Donkin, Bryan, & Co., Ltd., London.
 Douglas Forge Co., Ltd., Wigan.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Dykes, G. & J., Bury.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edie, Henry, & Co., London.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Fotherby & Co., Wakefield.
 Fowler, John, Sheffield.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Son, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Ginman & Son, Plumstead.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Gregg, W., Sons & Phoenix, Belfast.
 Haigh, John, & Sons, Ltd., Huddersfield.
 Haley, E. & W. H., Bradford.
 Hall, John, & Son, Oldham.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Haxby & Sewells, Halifax.
 Hayward Brothers & Eckstein, Ltd., London.
 Heald, John, Chorley.
 Henderson, D. & W., & Co., Glasgow.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hind & Lund, Ltd., Preston.
 Hodge, Samuel, & Sons, Ltd., London.
 Hodgson, H. E., & Co., Cleckheaton.
 Houston & Hamilton, Belfast.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.

Iron Founders—continued.

Hunter & English, London.
 Jackson & Brother, Bolton.
 Jardine, John, Nottingham.
 Jefferson, Joseph, & Brothers, Bradford.
 Johnson, William, & Sons, Leeds.
 Jones, John, & Sons, Liverpool.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Lambeth Brass and Iron Co., Ltd., London.
 Leach & Co., Rochdale.
 Lee, Croll & Co., Lochee.
 Livesey, Henry, Ltd., Blackburn.
 Low, James F., & Co., Monifieth.
 M'Kinnon, William, & Co., Aberdeen.
 McNaught, John & William, Rochdale.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Marsden, John, & Son, Liverpool.
 Mather, Alex., & Son, Edinburgh.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Moore, James, & Son, Ltd., Belfast.
 Morley, Y. H., Halifax.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 Noble & Lund, Felling-on-Tyne.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Oxley Brothers, Ltd., Sheffield.
 Oxley, George, & Sons, Sheffield.
 Parker, Charles, Sons & Co., Dundee.
 Parkinson, J., Shipley.
 Pease, Rhodes & Co., Ltd., Bradford.
 Petrie, John, Jun., Ltd., Rochdale.
 Pickup & Kelly, Darwen.
 Pilling, John, & Sons, Ltd., Colne.
 Qualter, Hall & Co., Barnsley.
 Rankin & Blackmore, Greenock.
 Ratcliff, J., & Sons, Leeds.
 Redpath & Paris, London.
 Reynolds, James, & Co., Belfast.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Tuer & Co., Manchester.
 Richards, W., & Son, Leicester.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robinson, Joseph, & Co., Manchester.
 Roger, R., & Co., Stockton-on-Tees.
 Rose, Downs & Thompson, Ltd., Hull.
 Russell, S., & Sons, Leicester.
 St. George's Ironworks, Ltd., Manchester.

Iron and Steel Founders - cont.

Iron Founders—continued.

Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Scriven & Co., Leeds.
 Seager, L. J. & C., Dartford.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Shorrock, J. & R Darwen.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, G. F., Halifax.
 Spencer, John, & Co., Keighley.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son, Ltd., London.
 Stirk, John, & Sons, Halifax.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Thompson, J. W., Sunderland.
 Thomson, Son & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tomlinson, G. W., Huddersfield.
 Tonkinson, H., & Sons, Sunderland.
 Urmson & Thompson, Oldham.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wailes, George, & Co., London.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Wallis Brothers, Sunderland.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Walmsley, Charles, & Co., Ltd., Bury.
 Waterson, H. J., & Co., Sunderland.
 Wearmouth Foundry Co., Ltd., The, Sunderland.
 Wheatley & Taylor, South Shields.
 White, W. B., Colne.
 Whittaker, William, & Sons, Oldham.
 Wilkinson, G., & Sons, Keighley.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Winder Brothers, Ltd., Sheffield.
 Wood & Gee, Wigan.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wood, J. & E., Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Iron Founders—continued.

Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Iron and Steel Founders—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Crowley, John, & Co., Ltd., Sheffield.
 Dearne & Dove Steel Co., Ltd., Barnsley.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jopling, E., & Sons, Sunderland.
 Musgrave, John, & Son, Ltd., Bolton.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Wells, Jonas, Keighley.

Steel Founders—

Allen, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd. Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Turton, George, Platts & Co., Sheffield.
 Vickers, Sons & Maxim, Ltd., Sheffield.

Iron and Steel Plates and Bars—

(See Steel and Iron Plates and Bars.)

Iron and Steel Works Plant—

(See Steel and Iron Works Plant; also under Machine Tools, Rolls and Rolling Mill Plant.)

Ironwork—Constructional—*(See Bridges, Roofs, and Constructional Iron and Steel Work.)***Jacks—Lifting—***(See Hydraulic Jacks, Screw Jacks, Ship Jacks—Hydraulic.)***Jacquard Card-Cutting Punching Machinery—**Ayrton, William, & Co., Manchester.
Benson, William, Nottingham.**Jacquard Looms and Machinery**

Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.

Crossley, John, & Co., Halifax.

Hacking & Co., Bury.

Hattersley, George, & Sons, Ltd., Keighley.

Richardson, Tuer & Co., Manchester.

White, W. B., Colne.

Jet Apparatus—

Gresham & Craven, Ltd. Manchester.

Ledward, T., & Co., London and Manchester.

Lees, Anderson & Co., Glasgow.

Meldrum Brothers, Manchester.

Joggling Machines—for Ship Plating and Frames—

Doxford, W., & Sons, Ltd., Sunderland.

Leeds Engineering and Hydraulic Co., Leeds.

Russell & Co., Port-Glasgow.

Smith Brothers & Co., Glasgow.

Smith, Hugh, & Co., Glasgow.

Joiners, Saw-Millers and Patternmakers—

Calvert & Co., Huddersfield.

Gibson, J., & Co., Leeds.

Gregson & Co., London.

Johnson, Thomas, & Co., London.

Robertson, A. W., London.

Scott & Co., Greenock.

Jute Machinery—*(See Flax, Hemp and Jute Machinery.)***Key-Seating Machines—**

Butler & Co., Halifax.

Harpers, Ltd., Aberdeen.

Smith & Coventry, Ltd., Manchester.

Spencer, John, & Co., Keighley.

Ward & Haggas, Keighley.

Kilns—

Blake, Barclay & Co., Greenock.

Craig, A. F., & Co., Ltd., Paisley.

Johnson, William, & Sons, Leeds.

Mather, Alex., & Son, Edinburgh.

Milne, James, & Son, Ltd., Edinburgh.

Pullan & Mann, Leeds.

West's Gas Improvement Co., Ltd., Manchester.

Kitchen Ranges—

Ashwell & Nesbit, Ltd., London and Leicester.

Chadwick, James, Bolton.

Crumblehulme, W., & Sons, Ltd., Bolton.

Tonkinson, Henry, & Sons, Sunderland.

Kneading and Mixing Machines*(See Mixing and Kneading Machines.)***Knitting Machines—**

Eclipse Machine Co., Ltd., Oldham.

Holroyd, John, & Co., Ltd., Rochdale.

Mellor, Moses, & Sons, Ltd., Nottingham.

Lace Machinery—

Cooke, W., Nottingham.
Hosiery Machine Building Co., Nottingham.
Jardine, John, Nottingham.

Lancashire Boilers—

(*See Boilers—Steam.*)

Lathes—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Asquith, William, Halifax.
Atlas Engineering Co., Manchester.
Berry, Francis, & Sons, Sowerby Bridge.
Birch, G., & Co., Manchester.
Bolton Engineering Co., Bolton.
Buckley, William, & Co., Sheffield.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Craven Brothers, Ltd., Manchester.
Darling & Sellers, Ltd., Keighley.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Greenwood & Batley, Ltd., Leeds.
Hamer, S. H., Halifax.
Hartley, Binns & Co., Halifax.
Harvey, G. & A., Glasgow.
Heap, William, & Co., Ltd., Ashton-under-Lyne.
Hetherington, John, & Sons, Ltd., Manchester.
Hodgson, H. E., & Co., Cleckheaton.
Holroyd, John, & Co., Ltd., Rochdale.
Hudson, Hall & Griffith, Keighley.
Hulse & Co., Ltd., Manchester.
Keighley Engineering Co., Keighley.
Kendall & Gent, Manchester.
Kitson, J., & Sons, Ltd., Bradford.
Lang, John, & Sons, Johnstone.
Loudon Brothers, Johnstone.
M'Dowall, John, & Sons, Johnstone.
Marsden, Samuel, & Son, Ltd., Manchester.
Maude & Turner, Halifax.
Midgley & Sutcliffe, Bradford.
Mudd, W. R., & Co., Leicester.
Muir, Wm., & Co., Ltd., Manchester.
Nasmyth, Wilson & Co., Ltd., Manchester.
Needham Brothers & Brown, Barnsley.

Lathes—continued.

Noble & Lund, Felling-on-Tyne.
Nottingham Engineering Co., Ltd., Nottingham.
Parkinson, J., Shipley.
Pratt, F., & Co., Ltd., Halifax.
Redman, C., & Sons, Halifax.
Ryder, Thomas, & Son, Bolton.
Ryder, William, Bolton.
Scott Brothers, Halifax.
Shanks, Thomas, & Co., Johnstone.
Shepherd, Hill & Co., Ltd., Leeds.
Smith & Coventry, Ltd., Manchester.
Smith, G. F., Halifax.
Southgate Engineering Co., Ltd., New Southgate, near London.
Spencer, James, & Co., Manchester.
Spencer, John, & Co., Keighley.
Standard Tool Co., Sowerby Bridge.
Stell, Stephen, Keighley.
Stirk, John, & Sons, Halifax.
Swift, George, Halifax.
Ward & Haggas, Keighley.
White, Thomas, & Sons, Paisley.
White, W. B., Colne.
Wilkinson, G., & Sons, Keighley.

Launches and Yachts—as a Specialty—

See also Shipbuilders and Repairers.)

Barclay, Curle & Co., Ltd., Glasgow.
Cochran & Co., Birkenhead.
Cran, John, & Co., Leith.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Eltringham, J. T., & Co., South Shields.
Fleming & Ferguson, Ltd., Paisley.
Hanna, Donald & Wilson, Paisley.
Hawthorns & Co., Leith.
Henderson, D. & W., & Co., Glasgow.
Inglis, A. & J., Glasgow.
Jones, John, & Sons, Liverpool.
Kincaid, John G., & Co., Greenock.
Lobnitz & Co., Ltd., Renfrew.
Lytham Shipbuilding Co., Lytham.
M'Kie & Baxter, Glasgow.
Mackie & Thomson, Glasgow.
Menzies & Co., Ltd., Leith.
Ramage & Ferguson, Ltd., Leith.
Renoldson, J. P., & Sons, South Shields.
Robertson, A. W., & Co., London.
Scott, John, & Co., Kinghorn.
Scott & Co., Greenock.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.

Launches and Yachts—as a Specialty—
continued.

Stewart, John, & Son, Ltd., London.
 Thornycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., London.
 Vickers, Sons, & Maxim, Ltd., Sheffield.
 Yarrow & Co., Ltd., London.

Laundry Machinery—

Appleyard, Joseph, Bradford.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Benham & Sons, Ltd., London.
 Bradford, T., & Co., Manchester.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Clayton, Howlett & Co., London.
 Fraser, John, & Son, London.
 Hall, J. & E., Ltd., Dartford.
 Haswell, J. Stenson, & Co., Leicester.
 McKinnon, William, & Co., Aberdeen.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Urnson & Thompson, Oldham.
 White, W. B., Colne.

Lead-Mining Machinery—*(See Mining Machinery.)***Lead (Sheet and Pipe) Machinery—**

Loudon Brothers, Johnstone.
 Strang, Joseph, Ltd., Ramsbottom.

Leather-Belt Machinery—

Appleyard, Joseph, Bradford.
 Greenwood & Batley, Ltd., Leeds.
 Pearson & Bennion, Ltd., Leicester.

Leather-Working Machinery—

Crossley, George, & Co., Ltd., Cleckheaton.
 Greenwood & Batley, Ltd., Leeds.
 Gimson & Co. (Leicester), Ltd., Leicester.

Leather-Working Machinery—
continued.

Larmuth, Thomas, & Co., Manchester.
 Pearson & Bennion, Ltd., Leicester.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Wright, B. & D., Leeds.

Lenses and Mirrors—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.

Lifting Jacks—*(See Hydraulic Jacks; Screw Jacks; Ship Jacks—Hydraulic.)***Lifts and Hoists—***(See Hoisting Machinery, Ash Hoists, Coal Hoists, Electric Hoists, Hydraulic Hoists, Elevators and Conveyors.)***Light-Draught Steamers—as a Specialty—***(See also Shipbuilders and Repairers.)*

Alley & Maclellan, Glasgow.
 Barclay, Curle & Co., Ltd., Glasgow.
 Bow, M'Lachlan & Co., Paisley.
 Croom & Arthur, Leith.
 Cran, John, & Co., Leith.
 Fleming & Ferguson, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Jones, John, & Co., Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lobnitz & Co., Ltd., Renfrew.
 Lytham Shipbuilding Co., Lytham.
 Scott & Co., Greenock.
 Smith, A. & D., & Co., London.
 Stewart, John, & Son, Ltd., London.
 Summers & Scott, Gloucester.
 Thornycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., London.
 Yarrow & Co., Ltd., London.

Lightning Conductors—

Bailey, W. H., & Co., Ltd., Manchester.
 Broadbent, T. W., Huddersfield.
 Dougill, Alf., & Co., Ltd., Leeds.
 Frost & Sons, London.
 Johnson & Phillips, Old Charlton.
 Milne, James, & Son, Ltd., Edinburgh.
 Pease, Rhodes & Co., Ltd., Bradford.
 Remington, T. W., & Co., London.
 Siemens Brothers & Co., Ltd., London.

Light-Railway Plant—

Fielding & Platt, Ltd., Gloucester.
 Green, Thomas, & Son, Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Leeds Forge Co., Ltd., Leeds.
 Mechan & Sons, Glasgow.
 Turton, George, Platts & Co., Sheffield.

Linenette-Finishing Machinery

Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwisle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Kenworthy, Royston & Co., Huddersfield.
 Riley, J. H., & Co., Bury.
 Walker, Samuel, Manchester.

Linoleum Machinery—

Bertram, James, & Son, Ltd., Edinburgh.
 Bertrams, Ltd., Edinburgh.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Masson, Scott & Co., Ltd., London.
 Mather, Alex., & Son, Edinburgh.
 Milne, James, & Son, Ltd., Edinburgh.
 Strang, Joseph, Ltd., Ramsbottom.
 Summers & Scott, Gloucester.
 West End Engine Works Co., Edinburgh.

Lithographic Printing Machinery—

(See Printing Machinery.)

Lithographic Stone Grinding Machinery—

Charlesworth, S., & Co., Oldham.
 Greenwood & Batley, Ltd., Leeds.
 Henderson, John M., Aberdeen.
 Ratcliffe, J., & Sons, Leeds.

Locomotives—

Beyer, Peacock & Co., Ltd., Manchester.
 Chapman & Furneaux, Gateshead-on-Tyne.
 Dubs & Co., Glasgow.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hudswell, Clarke & Co., Leeds.
 Hunslet Engine Co., Leeds.
 Johnson & Phillips, Old Charlton.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kitson & Co., Leeds.
 Manning, Wardle & Co., Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Peckett & Sons, Bristol.
 Sharp, Stewart & Co., Ltd., Glasgow.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Walker Brothers, Wigan.

Locomotive Mountings—

Adams, Thomas, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Chapman & Furneaux, Gateshead-on-Tyne.
 Dewrance & Co., London.
 Dubs & Co., Glasgow.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Lambeth Brass and Iron Co., Ltd., London.
 Madan, Charles S., & Co., Manchester.

Locomotive Mountings—continued.

Marchant, G. M., Huddersfield.
 Morton & Edwards, Stalybridge.
 Moorhouse, Sydney, & Co., Stalybridge.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Looms—

Atherton Brothers, Ltd., Preston.
 Blackburn Loom and Weaving Machinery Making Co., (William Dickinson & Sons), Ltd., Blackburn.
 Butterworth & Dickinson, Burnley.
 Clarke, T. A. W., Leicester.
 Cooper Brothers, Ltd., Burnley.
 Craig, A. F., & Co., Ltd., Paisley.
 Fraser, Douglas, & Sons, Arbroath.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hacking & Co., Bury.
 Hattersley, G., & Sons, Ltd., Keighley.
 Hutchinson, Hollingworth & Co., Ltd., Debeross and Halifax.
 Jackson & Brother, Bolton.
 Keighley, George, Burnley.
 Larnuth, Thomas, & Co., Manchester.
 Leach & Co., Rochdale.
 Livesey, Henry, Ltd., Blackburn.
 Parker, Charles, Sons & Co., Dundee.
 Pemberton & Co., Burnley.
 Pilling, John, & Sons, Ltd., Colne.
 Platt Brothers & Co., Ltd., Oldham.
 Richardson, Tuer & Co., Manchester.
 Robertson & Orchar, Ltd., Dundee.
 Scriven & Co., Leeds.
 Shorrocks, J. & R., Darwen.
 Smith, William, & Brothers, Ltd., Heywood.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 White, W. B., Colne.

Lubricators (Sight-Feed) and Lubricating Cups—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Bailey, W. H., & Co., Ltd., Manchester.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Dewrance & Co., London.
 Donkin, Bryan, & Co., Ltd., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Oldham, Alexander, & Sons, Dukinfield.
 Saxon, George, Manchester.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Machine Tools—

See also Sections undernoted:—

Bending Roll's and Machines.
 Bevelling Machines.
 Boring and Tapping Machines.
 Drilling Machines.
 Electric Drillers.
 Flanging Machines.
 Forging Presses.
 Grinding and Polishing Machinery.
 Hammers—Steam.
 Hydraulic Riveters.
 Joggling Machines.
 Key-Seating Machines.
 Lathes.
 Milling Machines.
 Multiple Drilling Machines.
 Multiple Punching Machines.
 Planing Machines.
 Punching and Shearing Machines.
 Radial Drills.
 Rivetting Machines.
 Saws for Metals.
 Screwing Machines.
 Shearing Machines.
 Slotting and Shaping Machines.
 Wheel Cutting Machines.
 Wood Working Machinery.

For Engineering Shops—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth Co., Ltd., Manchester.

Machine Tools—continued.

For Engineering Shops—continued.

Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Beyer, Peacock & Co., Ltd., Manchester.
 Bigwood, J., & Son, Wolverhampton.
 Binns Brothers, Halifax.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Bradbury & Co., Ltd., Oldham.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells and Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Croft & Naylor, Keighley.
 Crookes, Roberts & Co., Sheffield.
 Crossley & Co., Johnstone.
 Darling & Sellers, Ltd., Keighley.
 Davis, A. J., Leicester.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Edwards, George, & Co., Johnstone.
 Fairbairn, Naylor, Macpherson & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser, Douglas, & Sons, Arbroath.
 Galloways, Ltd., Manchester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hanna, Donald & Wilson, Paisley.
 Harvey, G. & A., Glasgow.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hudson, Hall & Griffith, Keighley.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Lang, John, & Sons, Johnstone.
 Loudon Brothers, Johnstone.
 M'Dowall, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Maud & Turner, Halifax.
 Mercer, Edward, Manchester.
 Midgeley & Sutcliffe, Bradford.
 Mudd, W. R., & Co., Leicester.
 Muir, Wm., & Co., Ltd., Manchester.

For Engineering Shops—continued.

Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 New Found Cycle Components Co., Leicester.
 Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Parkinson, J., Shipley.
 Pegg, Samuel, & Son, Leicester.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ross, R. G., & Son, Glasgow.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scott Brothers, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Sharp, Stewart, & Co., Ltd., Glasgow.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stell, Stephen, Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

For Iron and Steel Works—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crookes, Roberts & Co., Sheffield.
 Crossley & Co., Johnstone.
 Crow, Harvey & Co., Glasgow.
 Darling & Sellers, Ltd., Keighley.
 Davy Brothers, Ltd., Sheffield.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.

Machine Tools—continued.**For Iron and Steel Works—continued.**

Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Hulse & Co., Ltd., Manchester.
 Kendal & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Sharp, Stewart & Co., Ltd., Glasgow.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith & Coventry, Ltd., Manchester.
 Smith, Hugh, & Co., Glasgow.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.

For Ship, Boiler and Bridge Builders—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd. Glasgow.
 Asquith, William, Halifax.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Son, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Binns Brothers, Halifax.
 Butler, J., & Co., Halifax.
 Cameron, John, Manchester.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crossley & Co., Johnstone.
 Crow, Harvey & Co., Glasgow.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Keighley.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hanna, Donald & Wilson, Paisley.
 Hartley, Binns & Co., Halifax.

For Ship, Boiler and Bridge Builders—continued.

Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Rice & Co., Leeds.
 Ross, R. G., & Son, Glasgow.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Smith, Hugh, & Co., Glasgow.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Son, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

For Tin, Zinc and Sheet-Iron Workers—

Bigwood, J., & Son, Wolverhampton.
 Blackburn & Crawshaw, Wakefield.
 Bradley, R., & Co., Wakefield.
 Smith, Daniel, & Co., Wolverhampton.

Machinists—

(See Agricultural Machinery, Bread and Biscuit Machinery, Dairy Machinery, Dyeing and Bleaching Machinery, Laundry Machinery, Paper-Making Machinery, Textile Machinery.)

Marine Engineers and Boiler-makers—

Alley & Maclellan, Glasgow.
 Allsup & Co., Ltd., Preston.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Blair & Co., Ltd., Stockton-on-Tees.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George Ltd., Sunderland.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Clyne, Mitchell & Co., Aberdeen.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dunlop, David J., & Co., Port-Glasgow.
 Dunsmuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fisher & Co., Paisley.
 Fleming & Ferguson, Ltd., Paisley.
 Fletcher, Son & Fearnall, Ltd., London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, R. & H., Ltd., London.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Harrison Engine Co., Ltd., Manchester.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.

Marine Engineers and Boilermakers—continued.

Henderson, D. & W., & Co., Glasgow.
 Hodge, Samuel, & Sons, Ltd., London.
 Holmes, C. D., & Co., Hull.
 Humphrys, Tennant & Co., London.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lewis, John, & Sons, Aberdeen.
 Lobnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Maudslay, Sons & Field, Ltd., London.
 Menzies & Co., Ltd., Leith.
 Morton, S. & H., & Co., Leith.
 Muir & Houston, Glasgow.
 Murdoch & Murray, Port-Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Penn, John, & Son, Ltd., London.
 Potter, W. H., & Sons, Liverpool.
 Ramage & Ferguson, Ltd., Leith.
 Rankin & Blackmore, Greenock.
 Readhead, John, & Sons, South Shields.
 Reid, Thomas, & Sons, Paisley.
 Rennie, G., & Co., London.
 Rennoldson, J. P., & Sons, South Shields.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Wigham, & Co., Newcastle-on-Tyne.
 Robertson, A. W., & Co., London.
 Ross & Duncan, Glasgow.
 Rowan, David, & Son, Glasgow.
 Scott, John, & Co., Kinghorn.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsgate.
 Simons, William, & Co., Ltd., Renfrew.
 Smith, A. & D., & Co., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Thornycroft, John I., & Co., London.

Marine Engineers and Boilermakers
—continued.

Vauxhall Ironworks Co., Ltd., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Wilkinson, William, & Co., Ltd., Wigan.
 Workman, Clark & Co., Ltd., Belfast.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yarrow & Co., Ltd., London.

Marine Shafting—

(See Shafting—Marine, Crank Shafts.)

Matchmaking Plant—

Summers & Scott, Gloucester.

Mechanical Stokers—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Bennis, Edward, & Co., Ltd., London.
 Haigh, W. B., & Co., Oldham.
 Meldrum Brothers, Manchester.
 Richardson, Tuer & Co., Manchester.
 Sinclair, George, Leith.
 Urnison & Thompson, Oldham.
 West's Gas Improvement Co., Ltd., Manchester.

Metallic Packings—

(See Packings—Engine.)

**Metals — Special Alloys, Antifric-
tion, etc.—**

Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Bowen & Co., London.
 Bumsted & Chandler, Hednesford.
 Dewrance & Co., London.
 Edie, Henry, & Co., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.

**Metals — Special Alloys, Antifric-
tion, etc.—continued.**

Frost & Sons, London.
 Lancaster & Tonge, Ltd., Manchester.
 Manganese Bronze and Brass Co., Ltd., London.
 Marchant, G. M., Huddersfield.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 Morris, J., & Co., London.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Phosphor Bronze Co., Ltd., London.
 Redpath & Paris, London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wells, Jonas, Keighley.
 West, John, London.
 Whitley Partners, Leeds.
 Williams Brothers, Sheffield.

Meters—Water, Gas, etc.—(See Gas Meters, Electric Meters,
Water Meters.)**Mill-Gearing, Shafting and
Shaft Fittings—**

(See also Wheels—Geared.)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Bailey & Garnett, Ltd., Stalybridge.
 Barker, John, & Sons, Ltd., Oldham.
 Barraclough, Joseph, & Sons, Barnsley.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Bentley & Jackson, Ltd., Bury.
 Berry John, Halifax.
 Bertrams, Ltd., Edinburgh.
 Bigwood, J., & Son, Wolverhampton.
 Blackburn, George, & Sons, Ltd., Nottingham.
 Blake, Barclay & Co., Greenock.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Bradley, R., & Co., Wakefield.
 Bridges, Thomas, & Sons, Wolverhampton.

Mill-Gearing, Shafting and Shaft Fittings—continued.

Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Butler, J., & Co., Halifax.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Calvert & Co., Huddersfield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter Brothers, Rochdale.
 Charlesworth, S., & Co., Oldham.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cole, T. & W., London.
 Combe, Barbour & Combe, Ltd., Belfast.
 Coulthurst, H. J. & A., Darwen.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Craven Brothers, Ltd., Manchester.
 Crook, Thomas T., Bolton.
 Crossley, George, Ltd., Cleckheaton.
 Daglish, Robert, & Co., St. Helens.
 Darlington Forge Co., Ltd., Darlington.
 Death & Harris, Leicester.
 Dickinson, John, & Co., Keighley.
 Downham, J., & Co., Bury.
 Dryden, Thomas, Preston.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Edmeston, Archd., & Sons, Manchester.
 Entwisle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Foster, Joseph, & Sons, Preston.
 Fotherby & Co., Wakefield.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Gimsons, Ltd., Stalybridge.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Glover, M., & Co., Leeds.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Günther, W., & Sons, Oldham.
 Harpers, Ltd., Aberdeen.

Mill-Gearing, Shafting and Shaft Fittings—continued.

Heald, John, Chorley.
 Hetherington, John, & Son, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Higginbottom & Mannock, Manchester.
 Hind & Lund, Ltd., Preston.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hudswell, Clarke & Co., Leeds.
 Hulse & Co., Ltd., Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jardine, John, Nottingham.
 Jefferson, Joseph, & Brothers, Bradford.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Kirkstall Forge Co., Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Dowall, John, & Sons, Johnstone.
 M'Kinnon, William, & Co., Aberdeen.
 McNaught, John & William, Rochdale.
 McNeil, John, & Co., Glasgow.
 Matthews, William, & Co., Manchester.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Needham Brothers & Brown, Barnsley.
 New Found Cycle Components Co., Leicester.
 Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Osborn, Samuel, & Co., Sheffield.
 Owen, Brazil & Holborow, Bristol.
 Pease, Rhodes & Co., Ltd., Bradford.
 Perkin & Co., Ltd., Leeds.
 Pullan & Mann, Leeds.
 Ratcliffe, J., & Sons, Leeds.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Reid, Thomas, & Sons, Paisley.
 Reynolds, James & Co., Belfast.

**Mill-Gearing, Shafting and Shaft
Fittings—continued.**

Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Russell, S., & Sons, Leicester.
 St. George's Ironworks, Ltd., Manchester.
 Sagar, J., & Co., Halifax.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Scriven & Co., Leeds.
 Seager, L. J. & C., Dartford.
 Sharples, William, & Co., Ramsbottom.
 Shaw, Mark, Huddersfield.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, John, Keighley.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stirk, John, & Sons, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Umphreston & Co., Ltd., Leith.
 Unbreakable Pulley and Mill-Gearing Co., Ltd., Manchester.
 Urmsom & Thompson, Oldham.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Wailes, George, & Co., London.
 Walmsley, Charles, & Co., Ltd., Bury.
 Ward & Haggas, Keighley.
 West End Engine Works Co., Edinburgh.
 Whitaker, C., & Co., Bradford.
 White, W. B., Colne.
 Whittaker, William, & Sons, Oldham.
 Winder Brothers, Ltd., Sheffield.
 Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wright, B. & D., Leeds.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Milling Cutters—Reamers, etc.—

Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Heap, William, & Co., Ltd. Ashton-under-Lyne.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendal & Gent, Manchester.
 Lang, John, & Sons, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Standard Tool Co., Sowerby Bridge.

Milling Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Butler, J., & Co., Halifax.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Newcastle-on-Tyne.
 Hetherington, John & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

**Mining Machinery and Tools—
Coal Mining—**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.

Mining Machinery and Tools— *continued.*

Coal Mining—*continued.*

Barraclough, Joseph, & Sons, Barnsley.
Bennis, Edward, & Co., Ltd., Bolton.
Bradley, R., & Co., Wakefield.
Brown Brothers & Co., Ltd., Edinburgh.

Cameron, John, Manchester.
Carrick & Wardale, Gateshead-on-Tyne.

Carruthers, J. H., & Co., Glasgow.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Death & Harris, Leicester.
Douglas Forge Co., Ltd., Wigan.
Douglass Brothers, Ltd., Blaydon-on-Tyne.

Dunston Engine Works Co., The, Dunston-on-Tyne.
Easton, Anderson & Goolden, Ltd., Erith.

Entwisle & Gass, Ltd., Bolton.
Fawcett, Preston & Co., Ltd., Liverpool.

Firth, Thomas, & Sons, Ltd., Sheffield.
Foster, Joseph, & Sons, Preston.
Fotherby & Co., Wakefield.
Fowler, John, & Co. (Leeds), Ltd., Leeds.

Fraser & Chalmers, Ltd., London.
Harrison & Hammond, Wakefield.
Hartnell, Wilson, Leeds.
Hathorn, Davey & Co., Leeds.
Heald, John, Chorley.
Henderson, John M., Aberdeen.
Jackson, P. R., & Co., Ltd., Manchester.

Jessop & Appleby Brothers (Leicester and London) Ltd., Leicester.
Jessop, Wm., & Sons, Ltd., Sheffield.
Kerr, Stuart & Co., Stoke-on-Trent.
Lancaster & Tonge, Ltd., Manchester.
Larmuth, Thomas, & Co., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.

Mather, Alex., & Son, Edinburgh.
Mavor & Coulson, Ltd., Glasgow.
Moore & Korte, Leeds.
Moreland, Richard, & Son, Ltd., London.

Napier Brothers, Ltd., Glasgow.
Needham Brothers & Brown, Barnsley.
Pearn, Frank, & Co., Ltd., Manchester.

Qualter, Hall & Co., Barnsley.
Rosling & Appleby, Bradford.
Scott & Hodgson, Manchester.
Siemens Brothers & Co., Ltd., London.

Coal Mining—*continued.*

Simpson, James, & Co., Ltd., London.
Walker Brothers, Wigan.
Wilkinson, William, & Co., Ltd., Wigan.
Wood & Gee, Wigan.
Worsley Mesnes Iron Works Co., Wigan.

Lead Mining—

Allsup & Co., Ltd., Preston.
Pulsometer Engineering Co., Ltd., London.
Shepherd, Hill & Co., Ltd., Leeds.

Mine Ventilation Plant—

Bumsted & Chandler, Hednesford.
Carrick & Wardale, Gateshead-on-Tyne.
Thwaites Brothers, Ltd., Bradford.
Walker Brothers, Wigan.

Mint Machinery—

Fletcher Brothers, Ashton-under-Lyne.
Greenwood & Batley, Ltd., Leeds.
Smith, Daniel, & Co., Wolverhampton.

Mixing and Kneading Machines

Crook, Thomas T., Bolton.
Hind & Lund, Ltd., Preston.
Johnson, William, & Sons, Leeds.
Pullan & Mann, Leeds.
Richmond & Chandler, Ltd., Manchester.

Mortar Mills—

(See also Concrete-Mixing Plant.)

Berry, John, & Co., Halifax.
Bigwood, J., & Son, Wolverhampton.
Brightside Foundry Co., Ltd., Sheffield.
Crook, Thomas T., Bolton.
Dongill, Alf., & Co., Ltd., Leeds.
Douglas Forge Co., Ltd., Wigan.
Heald, John, Chorley.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.

Mortar Mills—continued.

Johnson, William, & Sons, Leeds.
 Oxley Brothers, Ltd., Sheffield.
 Spencer, John, & Co., Keighley.
 Stothert & Pitt, Ltd., Bath.
 Strang, Joseph, Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.
 Waller, George, & Co., Stroud.
 Whitaker, C., & Co., Bradford.
 White, W. B., Colne.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Motor Vehicles—

Bradbury & Co., Ltd., Oldham.
 Clift, E. H., London.
 Coulthard, T., & Co., Preston.
 Dougill, Alf., & Co., Ltd., Leeds.
 Goodwin, Arnold, & Son, London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mann & Charlesworth, Leeds.
 Stephens, Smith & Co., Ltd., London.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Moulding Machines—

(See Sand-Moulding Machines,
 Wheel-Moulding Machines.)

Multiple-Drilling Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.

Multiple-Drilling Machines—continued.

Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd. Leeds.
 Smith & Coventry, Ltd., Manchester.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Multiple-Punching Machines—

Berry, Francis, & Sons, Sowerby Bridge.
 Craig & Donald, Johnstone.
 Fielding & Platt, Ltd., Gloucester.
 Hanna, Donald, & Wilson, Paisley.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.

Nails—

Stone, J., & Co., London.
 Williams Brothers, Sheffield.

Navvies—Steam—

(See Excavators—Steam.)

Needles and Wire—

Jardine, John, Nottingham.

Nuts—

(See Bolts, Nuts, Rivets, Screws
 and Washers.)

Oil-Cake Crushers—

Richmond & Chandler, Ltd., Manchester.

Oil-Cake Presses—

Greenwood & Batley, Ltd., Leeds.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Musgrave Brothers, Leeds.
 Rose, Downs & Thompson, Ltd.
 Hull.

Oil-Distilling Plant—

Ashmore, Benson, Pease & Co., Ltd.,
Stockton-on-Tees.
Craig, A. F., & Co., Ltd., Paisley.
Daglish, Robert, & Co., St. Helens.
Fraser, John, & Son, London.
M'Neil, John, & Co., Glasgow.
Marsden, John, & Son, Liverpool.

Oil Engines—

Andrew, J. E. H., & Co., Ltd., Red-
dish.
Bow, M'Lachlan, & Co., Paisley.
Clarke, Chapman & Co., Ltd.,
Gateshead-on-Tyne.
Clarke, T. A. W., Leicester.
Donkin, Bryan, & Co., Ltd., London.
Dougill, Alf., & Co., Ltd., Leeds.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
National Gas Engine Co., Ltd.,
Ashton-under-Lyne.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Perkin & Co., Ltd., Leeds.
Stephenson, Robert, & Co., Ltd.,
Newcastle-on-Tyne.

Oil Extractors—

Foster Brothers (Gloucester), Ltd.,
Gloucester.
Haigh, W. B., & Co., Oldham.
Holroyd, John, & Co., Ltd., Roch-
dale.
Thornton & Crebbin, Bradford.
Watson, Henry, & Sons, Newcastle-
on-Tyne.
Waygood, R., & Co., Ltd. London.

Oil Filters—

Bennis, Edward, & Co., Ltd., Bolton.
Caird & Rayner, London.
Carruthers, J. H., & Co., Glasgow.
Greenwood & Batley, Ltd., Leeds.
Haigh, W. B., & Co., Oldham.
Rose, Downs & Thompson, Ltd.,
Hull.
Storey, Isaac, & Sons, Manchester.
Watson, Henry, & Sons, Newcastle-
on-Tyne.

Oil-Gas Apparatus—

Dougill, Alf., & Co., Ltd., Leeds.
Pope, W., & Son, Ltd., London.
Wailles, George, & Co., London.

Oil-Mill Machinery—

Greenwood & Batley, Ltd., Leeds.
M'Neil, John, & Co., Glasgow.
Manlove, Alliott & Co., Ltd., Not-
tingham.
Middleton, Robert, Leeds.
Musgrave Brothers, Leeds.
Rose, Downs & Thompson, Ltd.,
Hull.
Summers & Scott, Gloucester.
Waller, George, & Co., Stroud.

Ordnance Machinery—

Armstrong, Sir W. G., Whitworth &
Co., Ltd., Manchester.
Greenwood & Batley, Ltd., Leeds.
Holroyd, John, & Co., Ltd., Rochdale.
Muir, Wm., & Co., Ltd., Manchester.
Scriven & Co., Leeds.
Shepherd, Hill & Co., Ltd., Leeds.
Southgate Engineering Co., Ltd.,
New Southgate, near London.
Ward & Haggas, Keighley.

Ordnance—Makers of—

Armstrong, Sir W. G., Whitworth &
Co., Ltd., Newcastle-on-Tyne and
Manchester.
Brown, John, & Co., Ltd., Sheffield.
Cammell, Charles, & Co., Ltd.,
Sheffield.
Easton, Anderson & Goolden, Ltd.,
Erith.
Firth, Thomas, & Sons, Ltd., Sheffield.
Vickers, Sons & Maxim, Ltd., Shef-
field and Erith.

Ore-Crushing Machinery—

Daglish, Robert, & Co., St. Helens.
Easton, Anderson & Goolden, Ltd.
Erith.
Firth, Thomas, & Sons, Ltd., Sheffield.
Fraser & Chalmers, Ltd., London.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.

Ore-Crushing Machinery—continued.

Johnson, William, & Sons, Leeds.
 Madan, Charles S., & Co., Manchester.
 Richardson, Thomas, & Co., Ltd.,
 Hartlepool.
 Tomlinson, James (Rochdale), Ltd.,
 Rochdale.
 Winder Brothers, Ltd., London.

**Ornamental Iron-Work—Gates,
Railings, etc.—**

Bailey & Garnett, Ltd., Stalybridge.
 Crumblehulme, W., & Sons, Ltd.,
 Bolton.
 Dougill, Alf., & Co., Ltd., Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Turner & Co., London.

**Overhead Travelling Cranes—
(See Cranes.)****Packings—Engine—**

Arundel & Co., Stockport.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Goodwin, Arnold, & Son, London.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Forge Co., Ltd., Leeds.
 Morris, J., & Co., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Oldham, Alexander, & Sons, Dukin-
 field.
 Oldham & Son, Manchester.
 Saxon, George, Manchester.
 Thomson, Son & Co., Dundee.
 Waller, George, & Co., Stroud.
 Wood, John & Edward, Bolton.

Paint-Mill Machinery—

Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Hind & Lund, Ltd., Preston.
 Johnson, William, & Sons, Leeds.
 Wailes, George, & Co., London.
 Winder Brothers, Ltd., Sheffield.

Paper-Bag Making Machinery—

Bunsted & Chandler, Hednesford.
 Milne, James, & Son, Ltd., Edinburgh.

Papermaking Machinery—

Aitchison & Co., Edinburgh.
 Bentley & Jackson, Ltd., Bury.
 Bertram, James, & Son, Ltd., Edin-
 burgh.
 Bertrams, Ltd., Edinburgh.
 Daglish, Robert, & Co., St. Helens.
 Donkin, Bryan, & Co., Ltd., London.
 Glover, M., & Co., Leeds.
 Greig, John, & Sons, Edinburgh.
 Jackson & Brother, Bolton.
 Luke & Spencer, Ltd., Manchester.
 Masson, Scott & Co., Ltd., London.
 Milne, James, & Son, Ltd., Edinburgh.
 Pickup & Kelly, Darwen.
 Shorrocks, J. & R., Darwen.
 Sinclair, George, Leith.
 Strang, Joseph, Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Walker, James, & Son, Edinburgh.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle
 on-Tyne.
 West End Engine Works Co., Edin-
 burgh.

Pattern Makers—

Bailey & Garnett, Ltd., Stalybridge.
 Bigwood, J., & Son, Wolverhampton.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbrough.
 Gibson, J., & Co., Leeds.
 Greenock Foundry Co., Greenock.
 Hargreaves, Lloyd, Halifax.

Pig Iron—

Cammell, Charles, & Co., Ltd.
 Sheffield.
 Palmer's Shipbuilding and Iron Co.,
 Ltd., Jarrow-on-Tyne.

Pile Drivers—

Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Southgate Engineering Co., Ltd., New Southgate, near London.

Pipes—Copper—

Elmore's Patent Copper Depositing Co., Ltd., Leeds.
 Frost & Sons, London.

Pipes—Iron and Steel—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Berry, John, Halifax.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Craig, A. F., & Co., Ltd., Paisley.
 Frost & Sons, London.
 Haley, E. & W. H., Bradford.
 Hanna, Donald & Wilson, Paisley.
 Mechan & Son, Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.

Pistons and Piston Rings—

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co., Ltd., Patricroft.
 Buckley, William, & Co., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Daglish, Robert, & Co., St. Helens.
 Edmeston, Archd., & Sons, Manchester.
 Foster, Joseph, & Sons, Preston.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Heald, John, Chorley.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jones, John, & Sons, Liverpool.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Lees, Anderson & Co., Glasgow.
 Mather, Alex., & Son, Edinburgh.

Pistons and Piston Rings—*continued.*

Matthews, William, & Co., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Noble & Lund, Felling-on-Tyne.
 Oldham, Alexander, & Sons, Dukinfield.
 Oldham & Son, Manchester.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Perkin & Co., Ltd., Leeds.
 Qualter, Hall & Co., Barnsley.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Thornycroft, John I., & Co., London.
 Urmson & Thompson, Oldham.
 Vauxhall Ironworks Co., Ltd., London.
 Wainwright, Thomas, & Sons, Stalybridge.
 Whitaker, C., & Co., Bradford.
 Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.

Planing Machines—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Harvey, G. & A., Glasgow.

Planing Machines—continued.

Hetherington, John, & Sons, Ltd.,
Manchester.
Hodgson, H. E., & Co., Cleckheaton.
Holroyd, John, & Co., Ltd., Roch-
dale.
Hulse & Co., Ltd., Manchester.
Kendall & Gent, Manchester.
Kitson, J., & Sons, Ltd., Bradford.
Loudon Brothers, Johnstone.
Midgley & Sutcliffe, Bradford.
Maud & Turner, Halifax.
Muir, Wm., & Co., Ltd., Manchester.
Nasymth, Wilson & Co., Ltd., Man-
chester.
Noble & Lund, Felling-on-Tyne.
Pratt, F., & Co., Ltd., Halifax.
Redman, C., & Son, Halifax.
Scott Brothers, Halifax.
Scriven & Co., Leeds.
Shanks, Thomas, & Co., Johnstone.
Shepherd, Hill & Co., Ltd., Leeds.
Smith & Coventry, Ltd., Manchester.
Smith, G. F., Halifax.
Spencer, John, & Co., Keighley.
Spencer, James, & Co., Manchester.
Stirk, John, & Sons, Halifax.
Swift, George, Halifax.
Ward & Haggas, Keighley.
Wilkinson, G., & Sons, Keighley.

Planing Machines—Plate-Edge—

Appleyard, Joseph, Bradford.
Armstrong, Sir W. G., Whitworth &
Co., Ltd., Manchester.
Arrol, Sir William, & Co., Ltd.,
Glasgow.
Asquith, William, Halifax.
Bennie, James, & Sons, Glasgow.
Berry, Francis, & Sons, Sowerby
Bridge.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Campbells & Hunter, Leeds.
Craig & Donald, Johnstone.
Craven Brothers, Ltd., Manchester.
Crow, Harvey & Co., Glasgow.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Edwards, George, & Co., Johnstone.
Greenwood & Batley, Ltd., Leeds.
Hartley, Binns & Co., Halifax.
Hetherington, John, & Sons, Ltd.,
Manchester.
Muir, Wm., & Co., Ltd., Manchester.
Noble & Lund, Felling-on-Tyne.

Planing Machines—Plate-Edge—cont.

Pratt, F., & Co., Ltd., Halifax.
Scriven & Co., Leeds.
Shepherd, Hill & Co., Ltd., Leeds.
Smith Brothers & Co., Glasgow.
Smith, Hugh, & Co., Glasgow.
Stirk, John, & Sons, Halifax.
Ward & Haggas, Keighley.

Plates—Armour—

(See Armour Plates.)

Plates—Iron and Steel—

(See Steel and Iron Plates and Bars)

Ploughs—Steam—

Fowler, John, & Co. (Leeds), Ltd.
Leeds.
M'Laren, J. & H., Leeds.

Plummer Blocks and Pedestals—(See Mill-Gearing, Shafting and
Shaft-Gearing.)**Pneumatic Machine Tools—**

De Bergue & Co., Ltd., Manchester.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
Ross, R. G., & Son, Glasgow.

Portable Engines—

Fowler, John, & Co. (Leeds), Ltd.
Leeds.
Marshall, Sons & Co., Ltd., Gair-
borough.
Dougill, Alf., & Co., Ltd., Leeds.

Portable Railways and Rolling Stock—

Fowler, John, & Co. (Leeds), Ltd., Leeds.
Henderson, John M., Aberdeen.
Kerr, Stuart & Co., Stoke-on-Trent.

Pottery Machines—

Kerr, Stuart & Co., Stoke-on-Trent.

Presses—Screw and Steam—

(See also Hydraulic Presses, Filter Presses and Sludge Presses.)

Benson, William, Nottingham.
Berry, Henry, & Co., Leeds.
Bigwood, J., & Son, Wolverhampton.
Charlesworth, S., & Co., Oldham.
Clayton, Howlett & Co., London.
Crossley, John, & Co., Halifax.
Death & Harris, Leicester.
Farmer, Sir James, & Sons, Ltd., Manchester.
Fawcett, Preston & Co., Ltd., Liverpool.
Glover, M., & Co., Leeds.
Greenwood & Batley, Ltd., Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson & Brother, Bolton.
Kenworthy, Royston & Co., Huddersfield.
Kincaid, John G., & Co., Greenock.
Muir, Wm., & Co., Ltd., Manchester.
Nasmyth, Wilson & Co., Ltd., Manchester.
Pegg, Samuel, & Son, Manchester.
Riley, J. H., & Co., Bury.
Robinson, Joseph, & Co., Manchester.
St. George's Ironworks, Ltd., Manchester.
Smith, Daniel, & Co., Wolverhampton.
White, W. B., Colne.

Pressure Gauges—

(See Gauges—Pressure.)

Printing Machinery—

Cloth—

(Including CALICO PRINTING.)

Edmeston, Archd., & Sons, Manchester.
Entwisle & Gass, Ltd., Bolton.
Farmer, Sir James, & Sons, Ltd., Manchester.
Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
Jackson & Brother, Bolton.
Jardine, John, Nottingham.
Strang, Joseph, Ltd., Ramsbottom.
Taylor, Thomas, Leicester.
Walker, Samuel, Manchester.

Floorecloths—

Bertram, James, & Son, Ltd., Edinburgh.
Bertrams, Ltd., Edinburgh.
Farmer, Sir James, & Sons, Ltd., Manchester.
Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
Masson, Scott & Co., Ltd., London.
Milne, James, & Son, Ltd., Edinburgh.
Strang, Joseph, Ltd., Ramsbottom.
Summers & Scott, Gloucester.
West End Engine Works Co., Edinburgh.

Letterpress—

Brenner Machine Co., Otley.
Charlesworth, S., & Co., Oldham.
Coulthard, T., & Co., Preston.
Dawson & Sons, Otley.
Dawson, H. & J., Bradford.
Foster, Joseph, & Sons, Preston.
Furnival & Co., Manchester.
Greenwood & Batley, Ltd., Leeds.
Greig, John, & Sons, Edinburgh.
Hopkinson & Cope, London.
Jardine, John, Nottingham.
Mann, G., & Co., Leeds.
Middleton, Thomas, & Co., London.
Miller & Richard, Edinburgh.
Newsum, Roberts & Co., Leeds.
Payne & Sons, Otley.
Pearson & Bennion, Ltd., Leicester.
Taylor, Thomas, Leicester.
Wade, Josiah, Halifax and Liverpool.
Wailes, George, & Co., London.

Printing Machinery—continued.**Lithographic—**

Bremner Machine Co., Otley.
 Charlesworth, S., & Co., Oldham.
 Dawson & Sons, Otley.
 Greig, John, & Sons, Edinburgh.
 Hopkinson & Cope, London.
 Mann, G., & Co., Leeds.
 Newsum, Roberts & Co., Leeds.
 Payne & Sons, Otley.
 Ratcliffe, J., & Sons, Leeds.

Wall Papers—

Edmeston, Archd., & Sons, Manchester.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Pickup & Kelly, Darwen.
 Shorrocks, J. & R., Darwen.
 Strang, Joseph, Ltd., Ramsbottom.

Projectiles—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.

Propellers—Air—

(See Fans and Blowers.)

Propellers and Propeller Blades—Marine—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Barclay, Curle & Co., Ltd., Glasgow.
 Billington & Newton, Longport.
 Black, William, South Shields.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Cammell, Charles, & Co., Ltd., Sheffield.

Propellers and Propeller Blades—Marine—continued.

Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Coates, Victor, & Co., Ltd., Belfast.
 Cran, John, & Co., Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunsmuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Greenock Foundry Co., Greenock.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 M'Kie & Baxter, Glasgow.
 Manganese Bronze and Brass Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Phosphor Bronze Co., Ltd., London.
 Ramage & Ferguson, Ltd., Leith.
 Redpath & Paris, London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Ritchie, Hart & Co., Ltd., Belfast.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Smith, A. & D., & Co., London.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Thornycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., London.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.

**Propellers and Propeller Blades—
Marine—continued.**

Watson, Henry, & Sons, Newcastle-on-Tyne.
Wearmouth Foundry Co., Ltd., Sunderland.
Wheatley & Taylor, South Shields.
Whitley Partners, Leeds.

Pug Mills—

Berry, John, Halifax.
Clayton, Howlett & Co., London.
Crook, Thomas T., Bolton.
Farmer, Sir James, & Sons, Ltd., Manchester.
Johnson, William, & Sons, Leeds.
Pullan & Mann, Leeds.

Pulley Blocks—

Bailey, W. H., & Co., Ltd., Manchester.
Coubro & Scrutton, London.
Crowley, John, & Co., Ltd., Sheffield.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Goodwin, Arnold, & Son, London.
Oxley Brothers, Ltd., Sheffield.

**Pulleys — Cast and Wrought
Iron—**

(See Mill-Gearing, Shafting and
Shaft Fittings.)

Pulverizers—

(See Disintegrators and Pulverizers.)

Pumps and Pumping Engines—

Air Pumps and Compressors.

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Arrol, Sir William, & Co., Ltd., Glasgow.
Ashton, Frost & Co., Ltd., Blackburn.

Air Pumps and Compressors—continued

Bailey, W. H., & Co., Ltd., Manchester.
Barracrough, Joseph, & Sons, Barnsley.
Bigwood, J., & Son, Wolverhampton.
Bow, M'Lachlan & Co., Paisley.
Bradley, R., & Co., Wakefield.
Browett, Lindley & Co., Ltd., Patricroft.
Brown Brothers & Co., Ltd., Edinburgh.
Buckley & Taylor, Oldham.
Calvert & Co., Huddersfield.
Cameron, John, Manchester.
Campbell & Calderwood, Paisley.
Carmichael, James, & Co., Ltd., Dundee.
Carrick & Wardale, Gateshead-on-Tyne.
Coates, Victor, & Co., Ltd., Belfast.
Craig, A. F., & Co., Ltd., Paisley.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Death & Harris, Leicester.
Dougill, Alf., & Co., Ltd., Leeds.
Douglas Forge Co., Ltd., Wigan.
Dryden, Thomas, Preston.
Easton, Anderson & Goolden, Ltd., Erith.
Evans, Joseph, & Sons, Wolverhampton.
Fawcett, Preston & Co., Ltd., Liverpool.
Foster, Joseph, & Sons, Preston.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
Galloways, Ltd., Manchester.
Good & Menzies, Ltd., Hull.
Goodwin, Arnold, & Son, London.
Greenock Foundry Co., Greenock.
Greenwood & Batley, Ltd., Leeds.
Hanna, Donald & Wilson, Paisley.
Herald, John, Chorley.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Hunter & English, London.
Jackson & Brother, Bolton.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kincaid, John G., & Co., Greenock.
Lancaster & Tonge, Ltd., Manchester.
Lees, Anderson & Co., Glasgow.
McNeil, John, & Co., Glasgow.
Manlove, Alliot & Co., Ltd., Nottingham.
Mavor & Coulson, Ltd., Glasgow.

Pumps and Pumping Engines— *continued.*

Air Pumps and Compressors—*continued.*

Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pulsometer Engineering Co., Ltd., London.
 Robinson, Joseph, & Co., Manchester.
 St. George's Ironworks, Ltd., Manchester.
 Schofield & Taylor, Huddersfield.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Simpson, James, & Co., Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, & Co., Ltd., Ramsbottom.
 Thwaites Brothers, Ltd., Bradford.
 Umpherston & Co., Ltd., Leith.
 Vauxhall Ironworks Co., Ltd., London.
 Wailes, George, & Co., London.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Waller, George, & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.
 West End Engine Works Co., Edinburgh.
 Whitaker, C., & Co., Bradford.
 Wilkinson, William, & Co., Ltd., Wigan.
 Winder Brothers, Ltd., Sheffield.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Centrifugal Pumps—

Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Bailey, W. H., & Co., Ltd., Manchester.

Centrifugal Pumps—*continued.*

Bow, M'Lachlan & Co., Paisley.
 Bumsted & Chandler, Hednesford.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Carruthers, J. H., & Co., Glasgow.
 Coates, Victor, & Co., Ltd., Belfast.
 Dougill, Alf., & Co., Ltd., Leeds.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwisle & Gass, Ltd., Bolton.
 Evans, Joseph, & Sons, Wolverhampton.
 Fraser & Chalmers, Ltd., London.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Jackson & Brother, Bolton.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Lancaster & Tonge, Ltd., Manchester.
 M'Kie & Baxter, Glasgow.
 Mavor & Coulson, Ltd., Glasgow.
 Moreland, Richard, & Son, Ltd., London.
 Pulsometer Engineering Co., Ltd., London.
 Redpath & Paris, London.
 Riley, J. H., & Co., Bury.
 Robinson, Joseph, & Co., Manchester.
 Rowan, David, & Son, Glasgow.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Simpson, James, & Co., Ltd., London.
 Stewart, John, & Son, Ltd., London.
 Strang, Joseph, & Co., Ltd., Ramsbottom.
 Thwaites Brothers, Ltd., Bradford.
 Vauxhall Ironworks Co., Ltd., London.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Winder Brothers, Ltd., Sheffield.

Duplex Pumps—

Abbott, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Bailey, W. H., & Co., Ltd., Manchester.
 Bow, M'Lachlan & Co., Paisley.

Pumps and Pumping Engines—
continued.

Duplex Pumps—continued.

Brown Brothers & Co., Ltd., Edinburgh.
Cameron, John, Manchester.
Campbell & Calderwood, Paisley.
Carrick & Wardale, Gateshead-on-Tyne.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Clyne, Mitchell & Co., Aberdeen.
Coates, Victor, & Co., Ltd., Belfast.
Dougill, Alf., & Co., Ltd., Leeds.
Easton, Anderson & Goolden, Ltd., Erith.
Evans, Joseph, & Sons, Wolverhampton.
Fielding & Platt, Ltd., Gloucester.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Greenock Foundry Co., Greenock.
Greenwood & Batley, Ltd., Leeds.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Lamont & Co., Paisley.
Leeds Engineering and Hydraulic Co., Ltd., Leeds.
Manlove, Alliott & Co., Ltd., Nottingham.
Mavor & Coulson, Ltd., Glasgow.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Pearn, Frank, & Co., Ltd., Manchester.
Pulsometer Engineering Co., Ltd., London.
Ramage & Ferguson, Ltd., Leith.
Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
Rice & Co., Leeds.
Rowan, David, & Son, Glasgow.
Saxon, George, Manchester.
Scott & Hodgson, Manchester.
Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
Sharples, William, & Co., Ramsbottom.
Simpson, James, & Co., Ltd., London.
Stead Brothers, Halifax.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Stewart, John, & Son Ltd., London.
Strang, Joseph, & Co., Ltd., Ramsbottom.
Vauxhall Ironworks Co., Ltd., London.

Duplex Pumps—continued.

Walker Brothers, Wigan.
Walker, Samuel, Manchester.
Waller, George, & Co., Stroud.
Walmsley, Charles, & Co., Ltd., Bury.
Watson, Henry, & Sons, Newcastle-on-Tyne.
Weir, G. & J., Ltd., Glasgow.
Whitaker, C., & Co., Bradford.
Winder Brothers, Ltd., Sheffield.

Hydraulic Pumps—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Amos & Smith, Hull.
Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Arrol, Sir William, & Co., Ltd., Glasgow.
Bailey, W. H., & Co., Ltd., Manchester.
Beck & Co., Ltd., London.
Benham & Sons, Ltd., London.
Bentley & Jackson, Ltd., Bury.
Berry, Henry, & Co., Leeds.
Bigwood, J., & Son, Wolverhampton.
Bow, M'Lachlan & Co., Paisley.
Brown Brothers & Co., Ltd., Edinburgh.
Calvert & Co., Huddersfield.
Cameron, John, Manchester.
Campbell & Calderwood, Paisley.
Carmichael, James, & Co., Ltd., Dundee.
Carrick & Wardale, Gateshead-on-Tyne.
Carruthers, J. H., & Co., Glasgow.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Coates, Victor, & Co., Ltd., Belfast.
Cowen, G. R., & Co., Nottingham.
Craig, A. F., & Co., Ltd., Paisley.
Craven Brothers, Ltd., Manchester.
Crossley, John, & Co., Halifax.
Crow, Harvey & Co., Glasgow.
Death & Harris, Leicester.
Dougill, Alf., & Co., Ltd., Leeds.
Downham, John, & Co., Bury.
Dryden, Thomas, Preston.
Easton, Anderson & Goolden, Ltd., Erith.
Entwistle & Gass, Ltd., Bolton.
Evans, Joseph, & Sons, Wolverhampton.

Pumps and Pumping Engines— *continued.*

Hydraulic Pumps—*continued.*

Fawcett, Preston & Co., Ltd., Liverpool,
 Fielding & Platt, Ltd., Gloucester.
 Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Fullarton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Good & Menzies, Ltd., Hull.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Hathorn, Davey & Co., Leeds.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Royston & Co., Huddersfield.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Ltd., Leeds.
 McNeil, John, & Co., Glasgow.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Moore & Korte, Leeds.
 Moreland, Richard, & Sons, Ltd., London.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 North-Eastern Marine Engineering Co., Ltd., Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Perkin & Co., Leeds.
 Pulsometer Engineering Co., Ltd., London.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Riley, J. H., & Co., Bury.

Hydraulic Pumps—*continued.*

Robinson, Joseph, & Co., Manchester.
 Rose, Downs & Thompson, Ltd., Hull.
 St. George's Ironworks, Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Shaw, Mark, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Smith, Hugh, & Co., Glasgow.
 Smith Brothers & Co., Glasgow.
 Stead Brothers, Halifax.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, & Co., Ltd., Ramsgate.
 Umpherston & Co., Ltd., Leith.
 Wailes, George, & Co., London.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walker, James, & Son, Edinburgh.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 West End Engine Works Co., Edinburgh.
 Whitaker, C., & Co., Bradford.
 Wilkinson, William, & Co., Ltd., Wigan.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Pumping Engines—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Ashton, Frost & Co., Ltd., Blackburn.
 Ashworth, Elijah, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Barraclough, Joseph, & Sons, Barnsley.
 Benham & Sons, Ltd., London.
 Bigwood, J., & Son, Wolverhampton.

Pumps and Pumping Engines—
continued.

Pumping Engines—continued.

Bow, M'Lachlan & Co., Paisley.
Bradley, R., & Co., Wakefield.
Brown Brothers & Co., Ltd., Edinburgh.
Buckley & Taylor, Oldham.
Cameron, John, Manchester.
Campbell & Calderwood, Paisley.
Carmichael, James, & Co., Ltd., Dundee.
Carrick & Wardale, Gateshead-on-Tyne.
Carruthers, J. H., & Co., Glasgow.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Coates, Victor, & Co., Ltd., Belfast.
Craig, A. F., & Co., Ltd., Paisley.
Cran, John, & Co., Leith.
Crow, Harvey & Co., Glasgow.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Death & Harris, Leicester.
Dougill, Alf., & Co., Ltd., Leeds.
Dryden, Thomas, Preston.
Easton, Anderson & Goolden, Ltd., Erith.
Entwisle & Gass, Ltd., Bolton.
Evans, Joseph, & Sons, Wolverhampton.
Fawcett, Preston & Co., Ltd., Liverpool.
Fielding & Platt, Ltd., Gloucester.
Fleming & Ferguson, Ltd., Paisley.
Foster, Joseph, & Sons, Preston.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Gimson & Co. (Leicester), Ltd., Leicester.
Goodwin, Arnold, & Son, London.
Gwynne & Co., London.
Hanna, Donald & Wilson, Paisley.
Heald, John, Chorley.
Hathorn, Davey & Co., Leeds.
Hick, Hargreaves & Co., Ltd., Bolton.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Hunter & English, London.
Jackson & Brother, Bolton.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.

Pumping Engines—continued.

Kenworthy, Taylor & Co., Barnsley.
Kincaid, John G., & Co., Greenock.
Lancaster & Tonge, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Ltd., Leeds.
M'Kie & Baxter, Glasgow.
M'Neil, John, & Co., Glasgow.
Manlove, Alliot & Co., Ltd., Nottingham.
Matthews, William, & Co., Manchester.
Middleton, Robert, Leeds.
Milne, James, & Son, Ltd., Edinburgh.
Moreland, Richard, & Son, Ltd., London.
Musgrave, John, & Son, Ltd., Bolton.
Nasmith, Wilson & Co., Ltd., Manchester.
Needham Brothers & Brown, Barnsley.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Owen, Brazil & Holborow, Bristol.
Pearn, Frank, & Co., Ltd., Manchester.
Perkin & Co., Ltd., Leeds.
Qualter, Hall & Co., Barnsley.
Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
Rice & Co., Leeds.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Rowan, David, & Son, Glasgow.
St. George's Ironworks, Ltd., Manchester.
Saxon, George, Manchester.
Schofield & Taylor, Huddersfield.
Scott & Hodgson, Manchester.
Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
Sharples, William, & Co., Ramsbottom.
Simpson, James, & Co., Ltd., London.
Smith, Hugh, & Co., Glasgow.
Stead Brothers, Halifax.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Stevenson & Co., Ltd., Preston.
Stewart, John, & Son, Ltd., London.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, & Co., Ltd., Ramsbottom.
Umpherston & Co., Ltd., Leith.
Vauxhall Ironworks Co., Ltd., London.
Walker Brothers, Wigan.
Walker, Eaton & Co., Sheffield.
Walker, James, & Son, Edinburgh.
Walker, Samuel, Manchester.
Waller, George, & Co., Stroud.

Pumps and Pumping Engines— *continued.*

Pumping Engines—*continued.*

Walmsley, Charles, & Co., Ltd., Bury.
Watson, Henry, & Sons, Newcastle-on-Tyne.
West End Engine Works Co., Edinburgh.
Wilkinson, William, & Co., Ltd., Wigan.
Winder Brothers, Ltd., Sheffield.
Wood & Gee, Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Worsley Mesnes Iron Works Co., Wigan.
Yates & Thom, Blackburn.

Punching and Shearing Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
Asquith, William, Halifax.
Bennie, James, & Sons, Glasgow.
Berry, Francis, & Sons, Sowerby Bridge.
Berry, Henry, & Co., Leeds.
Birch, G., & Co., Manchester.
Brightside Foundry Co., Ltd., Sheffield.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Cameron, John, Manchester.
Craig & Donald, Johnstone.
Craven Brothers, Ltd., Manchester.
Crow, Harvey & Co., Glasgow.
Davis & Primrose, Leith.
Davy Brothers, Ltd., Sheffield.
Dean, Smith & Grace, Ltd., Keighley.
De Bergue & Co., Ltd., Manchester.
Dickinson, John, & Co., Keighley.
Edward, George, & Co., Johnstone.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
Hanna, Donald & Wilson, Paisley.
Hetherington, John, & Sons, Ltd., Manchester.
Hodgson, H. E., & Co., Cleckheaton.
Hulse & Co., Ltd., Manchester.
Luke & Spencer, Ltd., Manchester.
Maud & Turner, Halifax.
Midgley & Sutcliffe, Bradford.
Muir, Wm., & Co., Ltd., Manchester.

Punching and Shearing Machines— *continued.*

Nasmyth, Wilson & Co., Ltd., Patricroft.
Noble & Lund, Felling-on-Tyne.
Oxley Brothers, Ltd., Sheffield.
Pratt, F., & Co., Ltd., Halifax.
Redman, C., & Sons, Halifax.
Scriven & Co., Leeds.
Shepherd, Hill & Co., Ltd., Leeds.
Smith Brothers & Co., Glasgow.
Smith, Daniel, & Co., Wolverhampton.
Smith, G. F., Halifax.
Smith, Hugh, & Co., Glasgow.
Spencer, John, & Co., Keighley.
Stirk, John, & Sons, Halifax.
Walker, Eaton & Co., Sheffield.
Ward & Haggas, Keighley.
White, W. B., Colne.
Wilkinson, G., & Sons, Keighley.

Quarry Plant—

(See Stone-Working Machinery.)

Quartz Crushing Machinery—

(See Ore-Crushing Machinery.)

Radial Drills—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Asquith, William, Halifax.
Atlas Engineering Co., Manchester.
Berry, Francis, & Sons, Sowerby Bridge.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Campbells & Hunter, Leeds.
Craven Brothers, Ltd., Manchester.
Crossley & Co., Johnstone.
Darling & Sellers, Ltd., Keighley.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Fraser, Douglas, & Sons, Arbroath.
Greenwood & Batley, Ltd., Leeds.
Hartley, Binns & Co., Halifax.
Hetherington, John, & Sons, Ltd., Manchester.
Hodgson, H. E., & Co., Cleckheaton.
Holroyd, John, & Co., Ltd., Rochdale.

Radial Drills—continued.

Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.
 Spencer, John, & Co., Keighley.
 Spencer, James, & Co., Manchester.
 Standard Tool Co., Sowerby Bridge.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Radiators—

(See Heating Apparatus.)

Rail-Benders—

Berry, Francis, & Sons, Sowerby Bridge.
 Craven Brothers, Ltd., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Henderson, John M., Aberdeen.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Daniel, & Co., Wolverhampton.
 Ward & Haggas, Keighley.

Rails—Iron and Steel—

Bolton Iron and Steel Co., Ltd., Bolton.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Fox, Samuel, & Co., Ltd., Sheffield.
 Kerr, Stuart & Co., Stoke-on-Trent.

Railway Plant—

(See also Axles, Buffers, Tyres, Locomotives, Light Railway Plant.)

Allen, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cravens, Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Fielding & Platt, Ltd., Gloucester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenwood & Batley, Ltd., Leeds.
 Gresham & Craven, Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kirkstall Forge Co., Leeds.
 Leeds Forge Co., Ltd., Leeds.
 Mather, Alex., & Son, Edinburgh.
 Pope, W., & Son, Ltd., London.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stone, J., & Co., London.
 Turton, George, Platts & Co., Sheffield.
 Vickers, Sons & Maxim, Ltd., Sheffield.

Railway Works Plant—

(See Contractors' Plant.)

Rams—Hydraulic—

(See also Hydraulic Machinery and Appliances.)

Fielding & Platt, Ltd., Gloucester.

Ranges—Kitchen—

Ashwell & Nesbit, Ltd., London and Leicester.
 Chadwick, James, Bolton.
 Crumblehulme, W., & Sons, Ltd., Bolton.
 Tonkinson, Henry, & Sons, Sunderland.

Recovery Plant for Bye-Products—

Ashmore, Benson, Pease & Co., Ltd.,
Stockton-on-Tees.
Carrick & Wardale, Gateshead-on-
Tyne.
Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.

Reducing Valves—

Adams, Thomas, Manchester.
Bailey, W. H., & Co., Ltd., Man-
chester.
Baldwin, James, Keighley.
Billington & Newton, Longport.
Carter, James, & Sons, Stalybridge.
Clark, J. & T., Bradford.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Dewrance & Co., London.
Eastwood, Walter, Ashton-under-
Lyne.
Feather, George R., Bolton.
Fielding & Platt, Ltd., Gloucester.
Fletcher Brothers, Ashton-under-Lyne.
Frost & Sons, London.
Fullerton, Hodgart & Barclay, Ltd.,
Paisley.
Jackson & Brother, Bolton.
Lancaster & Tonge, Ltd., Manchester.
Manlove, Alliot & Co., Ltd., Not-
tingham.
Marchant, G. M., Huddersfield.
Meadowcroft, C. H., & Brother,
Dukinfield.
Moorhouse, Sydney, & Co., Staly-
bridge.
Moorhouse, Walter, & Co., Staly-
bridge.
Morton & Edwards, Stalybridge.
Pease, Rhodes & Co., Ltd., Bradford.
Roger, R., & Co., Stockton-on-Tees.
Schofield & Taylor, Huddersfield.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Turnbull, Alexander, & Co., Glasgow.
Watson, Henry, & Sons, Newcastle-
on-Tyne.
Whitley Partners, Leeds.
Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.

Reeds and Reed-Making Machinery—

Cook, S., & Co., Bury.

Refrigerating Machinery—

Cole, T. & W., London.
Hall, J. & E., Ltd., Dartford.
M'Kinnon, William, & Co., Aberdeen.
Pulsometer Engineering Co., Ltd.,
London.
Sharples, William, & Co., Rams-
bottom.
Stevenson & Co., Ltd., Preston.

Refuse Destructors—

(See Destructors—Refuse.)

Relief Valves—

Abbot, John, & Co., Ltd., Gateshead-
on-Tyne.
Adams, Thomas, Manchester.
Bailey, W. H., & Co., Ltd., Man-
chester.
Baldwin, James, Keighley.
Berry, Henry, & Co., Leeds.
Carter, James, & Sons, Stalybridge.
Clark, J. & T., Bradford.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Feather, George R., Bolton.
Fielding & Platt, Ltd., Gloucester.
Fletcher Brothers, Ashton-under-Lyne.
Frost & Sons, London.
Fullerton, Hodgart & Barclay, Ltd.,
Paisley.
Galloways, Ltd., Manchester.
Jackson & Brother, Bolton.
Lambeth Brass and Iron Co., Ltd.,
London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Moorhouse, Sydney, & Co., Staly-
bridge.
Moorhouse, Walter, & Co., Staly-
bridge.
Morton & Edwards, Stalybridge.
Pease, Rhodes & Co., Ltd., Bradford.
Rice & Co., Leeds.
Stewart, John, & Son, Ltd., London.
Storey, Isaac, & Sons, Manchester.
Turnbull, Alexander, & Co., Glasgow.
Urmson & Thompson, Oldham.
Whitley Partners, Leeds.
Woods, Hamilton, & Co., Ltd., Man-
chester.
Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.

Repairers—Ship and Engine—

(See also Shipbuilders, Dry Dock Proprietors, Slipway (Ship's Repairing) Proprietors.)

Albert Dock Engine Works, London.
Allsup & Co., Ltd., Preston.
Amor, R., & Co., London.
Amos & Smith, Hull.
Barclay, Curle & Co., Ltd., Glasgow.
Blackwood & Gordon, Port-Glasgow.
Brodie, John, & Co., Ltd., London.
Brown's Dry Dock and Engineering Co., Ltd., London.
Cran, John, & Co., Leith.
Central Marine Engine Works, The, West Hartlepool.
Croom & Arthur, Leith.
Deptford Dry Docks Co., Ltd., London.
Dickinson, John, & Sons, Ltd., Sunderland.
Dunsmuir & Jackson, Glasgow.
Dunston Engine Works Co., Dunston-on-Tyne.
Eltringham, J. T., & Co., South Shields.
Fawcett, Preston & Co., Ltd., Liverpool.
Fletcher, Son & Fearnall, Ltd., London.
Glengall Iron Works, Ltd., London.
Gourlay Brothers & Co., Dundee.
Green, R. & H., Ltd., London.
Hall, A., & Co., Aberdeen.
Hall, Russell & Co., Ltd., Aberdeen.
Hanna, Donald & Wilson, Paisley.
Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
Hawthorns & Co., Ltd., Leith.
Henderson, D. & W., & Co., Glasgow.
Hodge, Samuel, & Sons, Ltd., London.
Holmes, C. D., & Co., Hull.
Inglis, A. & J., Glasgow.
Jones, John, & Sons, Liverpool.
Kincaid, John G., & Co., Greenock.
Laird Brothers, Birkenhead.
Lees, Anderson & Co., Glasgow.
Lester & Perkins, London.
Lobnitz & Co., Ltd., Renfrew.
London Graving Dock Co., Ltd., London.
Menzies & Co., Ltd., Leith.
Morton, S. & H., & Co., Leith.
Napier, R., & Sons, Ltd., Glasgow.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.

Repairers—Ship and Engine—continued.

Potter, W. H., & Sons, Liverpool.
Rait & Gardiner, London.
Readhead, John, & Sons, South Shields.
Redpath & Paris, London.
Rennoldson, J. P., & Sons, South Shields.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Rodger, A., & Co., Port-Glasgow.
Robertson, A. W., & Co., London.
Robinson & Dodd, London.
St. George's Ironworks, Ltd., Manchester.
Scott & Co., Greenock.
Smith, A. & D., & Co., London.
Stephens, Smith & Co., Ltd., London.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Stewart, John, & Sons, Ltd., London.
Stothert, G. K., & Co., Bristol.
Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.

Rice Mill Machinery—

Foster, Joseph, & Sons, Preston.
Fullarton, Hodgart & Barclay, Ltd., Paisley.
Hind & Lund, Ltd., Preston.
Hunter & English, London.
M'Neil, John, & Co., Glasgow.
Mather, Alex., & Son, Edinburgh.
Waygood, R., & Co., Ltd., Newcastle-on-Tyne.

Riveting Machines—Hydraulic and Pneumatic—

Arrol, Sir William, & Co., Ltd., Glasgow.
Bennie, James, & Sons, Glasgow.
Berry, Henry, & Co., Leeds.
Brown Brothers & Co., Ltd., Edinburgh.
Crow, Harvey & Co., Glasgow.
De Bergue & Co., Ltd., Manchester.
Dickinson, John, & Co., Keighley.
Fielding & Platt, Ltd., Gloucester.
Galloways, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
Musgrave Brothers, Leeds.
Rice & Co., Leeds.
Ross, R. G., & Son, Glasgow.
Smith Brothers & Co., Glasgow.
Smith, Daniel, & Co., Wolverhampton.
Smith, Hugh, & Co., Glasgow.

Rivet-Making Machinery—

Adamson, Daniel, & Co., Dukinfield.
Greenwood & Batley, Ltd., Leeds.
Marsden, Samuel, & Son, Ltd., Manchester.

Rivets—

(See Bolts, Rivets, Screws, Nuts and Washers.)

Road Rollers—

(See Rollers—Road—Steam.)

Rock Breakers—

(See Stone Breakers, Ore Crushers.)

Rock Drills—

Clarke, T. A. W., Leicester.
Easton, Anderson & Goolden, Ltd., Erith.
Fawcett, Preston & Co., Ltd., Liverpool.
Firth, Thomas, & Sons, Ltd., Sheffield.
Foster, Joseph, & Sons, Preston.
Fraser & Chalmers, Ltd., London.
Gimson & Co. (Leicester), Ltd., Leicester.
Henderson, John M., Aberdeen.
Jackson, P. R., & Co., Ltd., Manchester.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Larmuth, Thomas, & Co., Manchester.
Madan, Charles S., & Co., Manchester.
Middleton, Robert, Leeds.
Rosling & Appleby, Bradford.
St. George's Ironworks, Ltd., Manchester.
Siemens Brothers & Co., Ltd., London.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Vauxhall Ironworks Co., Ltd., London.
Wood, John & Edward, Bolton.

Rollers—Road—Steam—

Calvert & Co., Huddersfield.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
Green, Thomas, & Son, Ltd., Leeds.
M'Laren, J. & H., Leeds.
Marshall, Sons & Co., Ltd., Gainsborough.

Rolling Mill Engines—

Adamson, Daniel, & Co., Dukinfield.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Crow, Harvey & Co., Glasgow.
Davy Brothers, Ltd., Sheffield.
Furness, Sir C., Westgarth & Co. Ltd., Middlesbro'.
Galloways, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
Musgrave, John, & Son, Ltd., Bolton.
Nasmyth, Wilson & Co., Ltd, Manchester.
St. George's Ironworks, Ltd., Manchester.
Saxon, George, Manchester.
Scott & Hodgson, Manchester.
Sharple, William, & Co., Ramsbottom.
Stevenson & Co., Ltd., Preston.
Thornton & Crebbin, Bradford.
Worsley Mesnes Iron Works Co., Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Yates & Thom, Blackburn.

Rolls—Bending—

(See Bending Rolls.)

Rolls—Calender—

(See Calenders.)

Rolls and Rolling-Mill Plant—

Brightside Foundry Co., Ltd., Sheffield.
Davy Brothers, Ltd., Sheffield.
Fowler, John, Sheffield.
Galloways, Ltd., Manchester.
Greenwood & Batley, Ltd., Leeds.
Jackson, P. R., & Co., Ltd., Manchester.
Oxley Brothers, Ltd., Sheffield.
Thornton & Crebbin, Bradford.
Umpherston & Co., Ltd., Leith.
Walker, Eaton & Co., Sheffield.
Winder Brothers, Ltd., Sheffield.

Roofs—

(See Bridges, Roofs and Structural Iron and Steel Work.)

Rope Pulleys—

(See Mill-Gearing, Shafting and Shaft Fittings.)

Rope, Twine and Braid Machinery—

Bywater, William, Leeds.
Clarke, T. A. W., Leicester.
Combe, Barbour & Combe, Ltd., Belfast.
Curtis, Sons & Co., Manchester.
Fraser, Douglas, & Sons, Arbroath.
Lawson, Samuel, & Sons, Leeds.
Taylor, Thomas, Leicester.
Taylor, Wordsworth & Co., Leeds.

Rubber-Mill Machinery—

Bertram, James, & Son, Ltd., Edinburgh.
Bertrams, Ltd., Edinburgh.
Greig, John, & Sons, Edinburgh.
Heald, John, Chorley.
Masson, Scott & Co., Ltd., London.
Robinson, Joseph, & Co., Manchester.
Umpherston & Co., Ltd., Leith.
Walker, Samuel, Manchester.

Safety Valves—

Adamson, Daniel, & Co., Dukinfield.
Adams, Thomas, Manchester.
Bailey, W. H., & Co., Ltd., Manchester.
Baldwin, James, Keighley.
Beeley, Thomas, Hyde.
Berry, Henry, & Co., Leeds.
Billington & Newton, Longport.
Carter, James, & Sons, Stalybridge.
Clark, J. & T., Bradford.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Dewrance & Co., London.
Donkin, Bryan, & Co., Ltd., London.

Safety Valves—continued.

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fielding & Platt, Ltd., Gloucester.
Fletcher Brothers, Ashton-under-Lyne.
Frost & Sons, London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
Galloways, Ltd., Manchester.
Jackson & Brother, Bolton.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Meadowcroft, C. H., & Brother, Dukinfield.
Moorhouse, Sydney, & Co., Stalybridge.
Moorhouse, Walter, & Co., Stalybridge.
Morton & Edwards, Stalybridge.
Oldham Boiler Works Co., Ltd., Oldham.
Pease, Rhodes & Co., Ltd., Bradford.
Rice & Co., Leeds.
Roger, R., & Co., Stockton-on-Tees.
Schofield & Taylor, Huddersfield.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Turnbull, Alexander, & Co., Glasgow.
Urmson & Thompson, Oldham.
Whitley Partners, Leeds.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Sand-Moulding Machines—

Darling & Sellers, Ltd., Keighley.
Dickinson, John, & Co., Keighley.

Sanitary Appliances—

(See also Heating and Ventilating Engineers.)

Frost & Sons, London.
Milne, James, & Son, Ltd., Edinburgh.
Stone, J., & Co., London.
Waller, George, & Co., Stroud.

Saw Benches—

Clarke, T. A. W., Leicester.
 Glover, M., & Co., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hudson, Hall & Griffith, Keighley.
 M'Dowall, John, & Sons, Johnstone.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Sagar, J., & Co., Halifax.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Ward & Haggas, Keighley.
 White, Thomas, & Sons, Paisley.

Saw Makers—

Allen, Edgar, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.

Saw Mill Machinery—

(See Wood-Working Machinery.)

Saw Sharpening Machines—

Birch, G., & Co., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hulse & Co., Ltd., Manchester.
 Luke & Spencer, Ltd., Manchester.
 M'Dowall, John, & Sons, Johnstone.
 Noble & Lund, Felling-on-Tyne.
 Sagar, J., & Co., Halifax.

Saws for Metals—

Allen, Edgar, & Co., Ltd., Sheffield.
 Bennie, James, & Sons, Glasgow.
 Birch, G., & Co., Manchester.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Craven Brothers, Ltd., Manchester.
 Davy Brothers, Ltd., Sheffield.
 Dean, Smith & Grace, Ltd., Keighley.

Saws for Metals—continued.

Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Noble & Lund, Felling-on-Tyne.
 Redman, C., & Sons, Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scriven & Co., Leeds.
 Smith Brothers & Co., Glasgow.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Screw Jacks—

Galloways, Ltd., Manchester.
 Herbert, E. G., Manchester.

Screw Propellers—

(See Propellers and Propeller Blades—Marine.)

Screwing Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Craven Brothers, Ltd., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Pratt, F., & Co., Ltd., Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.

Screwing Machines—continued.

Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Sirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Screws and Studs—

Holroyd, John, & Co., Ltd., Rochdale.
 Kirby Banks Screw Co., Ltd., Leeds.
 Lang, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Pool, L., & Son, Leeds.

Search-Light Projectors—

Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Easton, Anderson & Goolden, Ltd., Erith.
 Hall, J. P., & Co., Oldham.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Siemens Brothers & Co., Ltd., London.

Seed-Crushing Machinery—

Downham, D., & Co., Bury.
 Greenwood & Batley, Ltd., Leeds.
 Harrison & Hammond, Wakefield.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Richmond & Chandler, Ltd., Manchester.
 Rose, Downs & Thompson, Ltd., Hull.

Separators—

Carter, James., & Sons, Stalybridge.
 Cole, T. & W., London.

Separators—continued.

Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Haigh, W. B., & Co., Oldham.
 Johnson, William, & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Schofield & Taylor, Huddersfield.
 Urmson & Thompson, Oldham.

Sewage Plant—

Ashton, Frost & Co., Ltd., Blackburn.
 Drysdale & Co., Glasgow.
 Gwynne & Co., London.
 Holroyd, Horsfield, & Wilson, Ltd., Leeds.
 M'Kinnon, William, & Co., Aberdeen.
 Manlove, Alliot & Co., Ltd., Nottingham.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Waller, George, & Co., Stroud.
 Winder Brothers, Ltd., Sheffield.
 Woods, Hamilton, & Co., Ltd., Manchester.

Sewing Machines—

Bradbury & Co., Ltd., Oldham.
 Eclipse Machine Co., Ltd., Oldham.
 Holroyd, John, & Co., Ltd., Rochdale.

Shafting—Marine—

(See also Crank-Shafts.)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Crow, Harvey & Co., Glasgow.
 Darlington Forge Co., Ltd., Darlington.
 Dickinson, John, & Sons, Ltd., Sunderland.

Shafting—Marine—continued.

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Hawthorn, R. & W., Leslie, & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.
 Woodhouse & Rixson, Sheffield.

Shafting—Mill—

(See Mill Gearing, Shafting, etc.)

Shaping Machines—

(See Slotting and Shaping Machines.)

Shearing Machines—

(See Punching and Shearing Machines.)

Shear-Legs—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Henderson, John M., Aberdeen.

Shears—for Blooms and Plates—

(See also Steel and Iron Works Plant.)

Crow, Harvey & Co., Glasgow.
 Davy Brothers, Ltd., Sheffield.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Shipbuilders and Repairers—

(See also Repairers—Ship and Engine.

Alley & Maclellan, Glasgow.
 Allsup & Co., Ltd., Preston.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Connell, Charles, & Co., Glasgow.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Doxford, W., & Sons, Ltd., Sunderland.
 Duncan, Robert, & Co., Ltd., Port-Glasgow.
 Dunlop, David J., & Co., Port-Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Fletcher, Son & Fearnall, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, R. & H., Ltd., London.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hamilton, William, & Co., Port-Glasgow.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.

Shipbuilders and Repairers—continued.

Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lobnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and
 Iron Shipbuilding Co., Ltd.,
 Glasgow.
 London Graving Dock Co., Ltd.,
 London.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Menzies & Co., Ltd., Leith.
 Morton, S. & H., & Co., Leith.
 Murdoch & Murray, Port-Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering
 Co., Ltd., Wallsend-on-Tyne and
 Sunderland.
 Palmer's Shipbuilding and Iron Co.,
 Ltd., Jarrow-on-Tyne.
 Potter, W. H., & Sons, Liverpool.
 Ramage & Ferguson, Ltd., Leith.
 Readhead, John, & Sons, South
 Shields.
 Rennie, G., & Co., London.
 Rennoldson, J. P., & Sons, South
 Shields.
 Richardson, Wigham, & Co., New-
 castle-on-Tyne.
 Robertson, A. W., & Co., London.
 Rodger, A., & Co., Port-Glasgow.
 Russell & Co., Port-Glasgow.
 Scott & Co., Greenock.
 Scott, John, & Co., Kinghorn.
 Simons, William, & Co., Ltd., Ren-
 frew.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Swan, C. S., & Hunter, Ltd., New-
 castle-on-Tyne.
 Thornycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Bar-
 row-in-Furness.
 Workman, Clark & Co., Ltd., Belfast.
 Yarrow & Co., Ltd., London.

Ship-Jacks—Hydraulic—

Berry, Henry, & Co., Leeds.
 Fielding & Platt, Ltd., Gloucester.

Ship Sidelights—

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Stone, J., & Co., London.
 Utley, Thomas, & Co., Liverpool.

Ship's Telegraphs—

Baldwin, James, Keighley.
 Chadburn & Sons, Ltd., Liverpool.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Harrison Engine Co., Ltd., Man-
 chester.
 Siemens Brothers & Co., Ltd., London.

Ship's Ventilators—

(See Ventilating Apparatus.)

Ship's Water-Closets—

Blundell's London Copper and Brass
 Works, Ltd., London.
 Stone, J., & Co., London.

Shipyard Machine Tools—

(See Machine Tools.)

Shot and Shell—

(See Projectiles.)

Silk and Silk-Waste Machinery—

Brooks & Doxey, Ltd., Manchester.
 Curtis, Sons & Co., Manchester.
 Fairbairn, Naylor, Macpherson &
 Co., Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hacking & Co., Bury.
 Hall & Stells, Keighley.
 Harding, Richardson, Rhodes & Co.
 Ltd., Leeds.
 Hetherington, John, & Sons Ltd.,
 Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.

Silk and Silk-Waste Machinery—cont.

Platt Brothers & Co., Ltd., Oldham.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd.,
 Heywood.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Wren, Henry, & Co., Manchester.

Sirens and Whistles—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Cran, John, & Co., Leith.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pulsometer Engineering Co., Ltd.,
 London.
 Storey, Isaac, & Sons, Manchester.

Sizing Machinery—

(See Beaming, Warping and Sizing
 Machinery; also Textile Machinery.)

**Slipway (Ship-Repairing) Manu-
 facturers—**

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Kincaid, John G., & Co., Greenock.
 Morton, S. & H., & Co., Leith.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.

**Slipway (Ship-Repairing) Pro-
 prietors—**

Blackwood & Gordon, Port-Glasgow.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Rennoldson, J. P., & Sons, South
 Shields.
 Wallsend Slipway and Engineering
 Co., Ltd., Newcastle-on-Tyne.

Slotting and Shaping Machines—

Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby
 Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Crookes, Roberts & Co., Sheffield.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Ashton-
 under-Lyne.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.

Slotting and Shaping Machines—*cont.*

Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Sludge Presses—

Ashton, Frost & Co., Ltd., Blackburn.
 Holroyd, Horsfield, & Wilson, Ltd.,
 Leeds.
 Manlove, Alliot & Co., Ltd., Notting-
 ham.

Sluice-Valves, Cocks and Hydrants—

(*See also Hydraulic Valves and Valves—
 Steam, Water, Gas.*)

Bailey, W. H., & Co., Ltd., Man-
 chester.
 Beck & Co., Ltd., London.
 Berry, Henry, & Co., Leeds.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Charlesworth, S., & Co., Oldham.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Goodwin, Arnold, & Son, London.
 Hanna, Donald & Wilson, Paisley.
 Hall, John, & Son, Oldham.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co.,
 Leeds.
 Marchant, G. M., Huddersfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Simpson, James, & Co., Ltd., London.
 Stone, J., & Co., London.
 Waller, George, & Co., Stroud.
 Whitley Partners, Leeds.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.
 Woods, Hamilton, & Co., Ltd.,
 Manchester.

Small-Arms Machinery—

(*See Ordnance Machinery.*)

Smelting Furnaces—

(*See Furnace—Smelting, etc.*)

Smiths' Hearths—

Butler, J., & Co., Halifax.
 Douglass Brothers, Ltd., Blaydon-on-
 Tyne.
 Fraser, Douglas, & Sons, Arbroath.
 Hamer, S. H., Halifax.
 Moore, James, & Sons, Ltd., Belfast.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Thwaites Brothers, Ltd., Bradford.

Soap-Making Plant—

Daglish, Robert, & Co., St. Helens.
 Holroyd, Horsfield & Wilson, Ltd.,
 Leeds.
 Johnson, William, & Sons, Leeds.
 M'Kinnon, William, & Co., Aberdeen.
 M'Neil, John, & Co., Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.
 Shepherd, Hill & Co., Ltd., Leeds.

**Spindles for Spinning Machines
 —Fly and Ring—**

Bodden, William, & Son, Oldham.
 Brooks & Doxey, Ltd., Manchester.
 Cook, Samuel, & Co., Bury.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Proctor, Jonas, Bolton.
 Ryder, William, Bolton.
 Sykes, John, & Sons, Ltd., Hudders-
 field.
 White, W. B., Colne.

Spinning and Weaving Machinery—

(See Carpet-Making Machinery, Cotton Preparing and Spinning Machinery, Looms, Silk and Silk Waste Machinery, Textile Machinery, Woollen, Worsted and Waste Machinery.)

Spooling Machines—

Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.

Holroyd, John, & Co., Ltd., Rochdale.
Livesey, Henry, Ltd., Blackburn.
White, Thomas, & Sons, Paisley.
Wren, Henry, & Co., Manchester.

Springs—

Adams, Thomas, Manchester.
Brown, John, & Co., Ltd., Sheffield.
Cammell, Charles, & Co., Ltd., Sheffield.

Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Cook, Samuel, & Co., Bury.
Fox, Samuel, & Co., Ltd., Sheffield.
Osborn, Samuel, & Co., Sheffield.
Turnbull, Alexander, & Co., Glasgow.
Turton, George, Platts & Co., Sheffield.
White, W. B., Colne.

Stable and Cattle Fittings—

Hayward Brothers & Eckstein, Ltd., London.
Mather, Alex., & Son, Edinburgh.
St. Pancras Ironworks Co., Ltd., London.

Stamp and Drop Hammers—

Bigwood, J., & Son, Wolverhampton.
Clarke, T. A. W., Leicester.
Greenwood & Batley, Ltd., Leeds.
Nasmyth, Wilson & Co., Ltd., Manchester.
Smith, Daniel, & Co., Wolverhampton.

Stamping Machinery—

Bigwood, J., & Son, Wolverhampton.
Bridges, Thomas, & Sons, Wolverhampton.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
Smith, Daniel, & Co., Wolverhampton.
Wailes, George, & Co., London.

Stampings—

Billington & Newton, Longport.
Central Marine Engine Works, West Hartlepool.
Clarke, T. A. W., Leicester.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Frost & Sons, London.
Kirkstall Forge Co., Leeds.
Manganese Bronze and Brass Co., Ltd., London.
Phosphor Bronze Co., Ltd., London.
White, W. B., Colne.

Starch-Making Machinery—

Reid, Thomas, & Sons, Paisley.

Steam Cranes—

(See Cranes.)

Steam Engines—

(See Blowing Engines, Driving Engines, Haulage Engines, High-Speed Engines, Marine Engines, Portable Engines, Pumping Engines, Rolling Mill Engines, Traction Engines, Tramway Engines, Winding Engines.)

Steam Hammers—

(See Hammers—Steam.)

Steam Ploughs—

(See Ploughs—Steam.)

Steam Traps—

(See Traps—Steam.)

Steam Whistles—

(See Sirens and Whistles.)

Steel Forgings—

(See Forgings—Iron and Steel.)

Steel Founders—

(See Iron and Steel Founders.)

Steel and Iron Plates and Bars—

Bolton Iron and Steel Co., Ltd., Bolton.

Brown, John, & Co., Ltd., Sheffield.

Cammell, Charles, & Co., Ltd., Sheffield.

Darlington Forge Co., Ltd., Darlington.

Jessop, Wm., & Sons, Ltd., Sheffield.

Kirkstall Forge Co., Leeds.

Leeds Forge Co., Ltd., Leeds.

Osborn, Samuel, & Co., Sheffield.

Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.

Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.

Vickers, Sons & Maxim, Ltd., Sheffield.

Steel and Iron Works Plant—continued.

Davy Brothers, Ltd., Sheffield.

Fielding & Platt, Ltd., Gloucester.

Galloways, Ltd., Manchester.

Hanna, Donald & Wilson, Paisley.

Hetherington, John, & Sons, Ltd., Manchester.

Jackson, P. R., & Co., Ltd., Manchester.

Pratt, F., & Co., Ltd., Halifax.

Scriven & Co., Leeds.

Shanks, Thomas, & Co., Johnstone.

Smith, Daniel, & Co., Wolverhampton.

Smith, Hugh, & Co., Glasgow.

Stevenson & Co., Ltd., Preston.

Thornton & Crebbin, Bradford.

Thwaites Brothers, Ltd., Bradford.

Walker Brothers, Wigan.

Winder Brothers, Ltd., Sheffield.

Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Steel Slabs and Ingots—

(See Ingots; also Billets and Blooms.)

Steering Gear—Ships'—

Alley & Maclellan, Glasgow.

Amos & Smith, Hull.

Bow, M'Lachlan & Co., Paisley.

Brown Brothers & Co., Ltd., Edinburgh.

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.

Croom & Arthur, Leith.

Davis & Co., Ltd., London.

Dunston Engine Works Co., Dunston-on-Tyne.

Earle's Shipbuilding and Engineering Co., Ltd., Hull.

Fawcett, Preston & Co., Ltd., Liverpool.

Fisher & Co., Paisley.

Harfield & Co., Ltd., Blaydon-on-Tyne.

Harrison Engine Co., Ltd., Manchester.

Lester & Perkins, London.

Napier Brothers, Ltd., Glasgow.

Redpath & Paris, London.

Reid, Thomas, & Sons, Paisley.

Roger, R., & Co., Stockton-on-Tees.

Rogerson, John, & Co., Ltd., Wolsingham.

Steel and Iron Works Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.

Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.

Bennis, Edward, & Co., Ltd., Bolton.

Berry, Henry, & Co., Leeds.

Booth, Joseph, & Brothers, Leeds.

Brightside Foundry Co., Ltd., Sheffield.

Buckton, Joshua, & Co., Ltd., Leeds.

Cowans, Sheldon & Co., Ltd., Carlisle.

Craven Brothers, Ltd., Manchester.

Crow, Harvey & Co., Glasgow.

Stereotyping Machinery—

Foster, Joseph, & Sons, Preston.
 Miller & Richard, Edinburgh.
 Taylor, Thomas, Leicester.

Stocks and Dies—

Armstrong, Sir W. G., Whitworth
 & Co., Ltd., Manchester.
 Heap, William, & Co., Ltd., Ashton-
 under-Lyne.
 Muir, Wm., & Co., Ltd., Manchester.
 Marsden, Samuel, & Son, Ltd., Man-
 chester.
 Smith & Coventry, Ltd., Manchester.
 Widdowson, J. H., Manchester.

Stokers—Mechanical—

(See Mechanical Stokers.)

Stone-Breakers—

Dunston Engine Works Co., Dunston-
 on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd.,
 Leicester.
 Johnson, William, & Sons, Leeds.
 Pegg, Samuel, & Son, Leicester.
 Richards, W., & Son, Leicester.

Stone-Working Machinery—

Abernethy, James, & Co., Aberdeen.
 Cole, T. & W., London.
 Death & Harris, Leicester.
 Henderson, John M., Aberdeen.
 Lee, Croll & Co., Lochae.
 M'Kinnon, William, & Co., Aberdeen.
 Smith, John, Keighley.
 Spencer, J., & Co., Keighley.
 Ward & Haggas, Keighley.

Stop-Valves—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Donkin, Bryan, & Co., Ltd., London.
 Fielding & Platt, Ltd., Gloucester.

Stop-Valves—continued.

Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Musgrave, John, & Son, Ltd., Bolton.
 Oldham Boiler Works Co., Ltd.,
 Oldham.
 Pease, Rhodes & Co., Ltd., Bradford.
 Rice & Co., Leeds.
 Storey, Isaac, & Son, Manchester.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.

**Structural Iron and Steel
Work—**

(See Bridges, Roofs, etc.)

Submarine Cables—

(See Cables.)

Suction-Draught Apparatus—

Brown, John, & Co., Ltd., Sheffield.

Sugar Machinery—

Abernethy, James, & Co., Aberdeen.
 Blake, Barclay & Co., Greenock.
 Bow, M'Lachlan & Co., Paisley.
 Campbell & Calderwood, Paisley.
 Clayton, Howlett & Co., London.
 Craig, A. F., & Co., Ltd., Paisley.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davis & Primrose, Leith.
 Death & Harris, Leicester.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart, & Barclay, Ltd.,
 Paisley.
 Kincaid, John G., & Co., Greenock.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Notting-
 ham.
 Marsden, John, & Son, Liverpool.
 Milne, James, & Son, Ltd., Edinburgh.
 Umpherston & Co., Ltd., Leith.
 Waygood, R., & Co., Ltd., London.

Superheaters—

Beeley, Thomas, Hyde.
 Bennis, Edward, & Co., Ltd., Bolton.
 Burnet, Lindsay, & Co., Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Fraser & Chalmers, Ltd., London.
 Hick, Hargreaves & Co., Ltd., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Schofield & Taylor, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Sinclair, George, Leith.

Switches—Electric—

(See Electric Switch Boards; also
 Electric Light Plant and
 Fittings.)

Switches—Railway—

Kerr, Stuart & Co., Stoke-on-Trent.

Tanks—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Barraclough, Joseph, & Sons, Barnsley.
 Bennis, Edward, & Co., Ltd., Bolton.
 Bertrams, Ltd., Edinburgh.
 Berry, John, Halifax.
 Bradley, R., & Co., Wakefield.
 Brightside Foundry Co., Ltd., Sheffield.
 Burnet, Lindsay, & Co., Glasgow.
 Calvert & Co., Huddersfield.
 Carmichael, James, & Co., Ltd., Dundee.
 Clayton, Son & Co., Ltd., Leeds.
 Coates, Victor, & Co., Ltd., Belfast.
 Cockburn, David, Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Crossley, George, Ltd., Cleckheaton.
 Daglish, Robert, & Co., St. Helens.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Douglas Forge Co., Ltd., Wigan.
 Dryden, Thomas, Preston.
 Edie, Henry, & Co., London.
 Eltringham, J. T., & Co., South Shields.

Tanks—continued.

Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hanna, Donald & Wilson, Paisley.
 Hall, John, & Son, Oldham.
 Hawthorns & Co., Ltd., Leith.
 Heald, John, Chorley.
 Hodge, Samuel, & Sons, Ltd., London.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 M'Neil, John, & Co., Glasgow.
 Mechan & Sons, Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ritchie, Hart & Co., Ltd., Belfast.
 Rose, Downs & Thompson, Ltd., Hull.
 Simpson, James, & Co., Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Strang, Joseph, Ltd., Ramsbottom.
 Thornton & Crebbin, Bradford.
 Tinker, Shenton & Co., Hyde.
 West End Engine Works Co., Edinburgh.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Taps and Dies—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Holroyd, John, & Co., Ltd., Rochdale.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Widdowson, J. H., Manchester.

Tapping Machines—*(See Boring and Tapping Machines.)***Tea-Dressing Machinery—**

Abernethy, James, & Co., Aberdeen.
 Clarke, T. A. W., Leicester.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Moreland Richard, & Son, Ltd., London.
 Robin Hood Cycle Co., Ltd., Nottingham.

Telegraph Cables and Wires—*(See Cables.)***Telegraphic Apparatus for Ships—**

Brown Brothers & Co., Ltd., Edinburgh.
 Chadburn & Sons, Ltd., Liverpool.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Johnson & Phillips, Old Charlton.
 Mechan & Sons, Glasgow.
 Siemens Brothers & Co., Ltd., London.

Telegraphic Instruments and Land Line Materials—

Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Telephones—

Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Testing Machines—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Craven Brothers, Ltd., Manchester.
 Crow, Harvey & Co., Glasgow.
 Denison, Samuel, & Son, Leeds.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser, Douglas, & Sons, Arbroath.
 Greenwood & Batley, Ltd., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Vauxhall Ironworks Co., Ltd., London.

Textile Machinery—*See also Sections undernoted :—*

Beaming, Warping and Sizing.
 Bleaching.
 Carpet Making.
 Cloth Finishing.
 Cloth Raising.
 Cotton Preparing and Spinning.
 Cotton Waste and Wadding.
 Dyeing.
 Flannelette Finishing.
 Flax, Hemp and Jute.
 Jacquard Looms.
 Lace.
 Linnenette Finishing.
 Looms.
 Rope, Twine and Braid.
 Silk and Silk Waste.
 Thread.
 Washing.
 Woollen, Worsted and Waste.

Arundel & Co., Stockport.
 Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Ayrtton, William, & Co., Manchester.
 Blackburn, George, & Sons, Ltd., Nottingham.
 Bailey & Garnett, Ltd., Stalybridge.
 Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
 Bodden, William, & Son, Oldham.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Clarke, T. A. W., Leicester.
 Cliffe & Co., Huddersfield.

Textile Machinery—continued.

Combe, Barbour & Combe, Ltd.,
Belfast.
Cooke, W., Nottingham.
Cooper Brothers, Ltd., Burnley.
Cotton, Stephen, & Co., Belfast.
Coulthard, T., & Co., Preston.
Craig, A. F., & Co., Ltd., Paisley.
Curtis, Sons & Co., Manchester.
Dobson & Barlow, Ltd., Bolton.
Dodd, Samuel, Oldham.
Downham, J., & Co., Bury.
Edmeston, Archd., & Sons, Manchester.
Entwisle & Gass, Ltd., Bolton.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Fraser, Douglas, & Sons, Arbroath.
Gimson & Co. (Leicester), Ltd.,
Leicester.
Greenwood & Batley, Ltd., Leeds.
Hacking & Co., Bury.
Hague, B., Nottingham.
Haigh, John, & Sons, Ltd., Hudders-
field.
Hall & Stells, Keighley.
Harding, Richardson, Rhodes & Co.,
Ltd., Leeds.
Hattersley, G., & Sons, Ltd., Keighley.
Hetherington, John, & Sons, Ltd.,
Manchester.
Holliday, Read, & Son, Ltd., Hudders-
field.
Holt, Thomas, Ltd., Rochdale.
Horner, George, Belfast.
Hosiery Machine Building Co., Nott-
ingham.
Houston & Hamilton, Belfast.
Hutchinson, Hollingworth & Co.,
Ltd., Huddersfield, Dobcross, and
Halifax.
Jackson & Brother, Bolton.
Jefferson, Joseph, & Brothers, Brad-
ford.
Keighley, George, Burnley.
Kenworthy, Royston & Co., Hudders-
field.
Kiddier, J., & Son, Nottingham.
Kilburn, R., & Sons, Leeds.
Kitson, J., & Sons, Ltd., Bradford.
Larmuth, Thomas, & Co., Manchester.
Lawson, Samuel, & Sons, Leeds.
Leach & Co., Rochdale.
Lee, Croll & Co., Lochee.
Lees, Asa, & Co., Ltd., Oldham.
Livesey, Henry, Ltd., Blackburn.
Low, James F., & Co., Monifieth.
M'Gee, Walter, & Son, Paisley.
Mason, John, Rochdale.
Miller, Moses, & Sons, Ltd., Notting-
ham.

Textile Machinery—continued.

Nottingham Engineering Co., Ltd.,
Nottingham.
Parker, Charles, Sons & Co., Dundee.
Parkinson, J., Shipley.
Pegg, Samuel, & Son, Leicester.
Pemberton & Co., Burnley.
Petrie, John, Jun., Ltd., Rochdale.
Pilling, John, & Sons, Ltd., Colne.
Platt Brothers & Co., Ltd., Oldham.
Proctor, Jonas, Bolton.
Ramsden Brothers, Keighley.
Ratcliffe, J., & Sons, Leeds.
Reynolds, James, & Co., Belfast.
Richardson, Tuer & Co., Manchester.
Riley, J. H., & Co., Bury.
Ritchie, Hart & Co., Ltd., Belfast.
Robertson & Orchar, Ltd., Dundee.
Robinson, Joseph, & Co., Manchester.
Robinson, William, & Son, Oldham.
Ryder, Thomas, & Son, Bolton.
Shorrocks, J. & R., Darwen.
Smith, Prince, & Son, Keighley.
Smith, William, & Brothers, Ltd.,
Heywood.
Strang, Joseph, Ltd., Ramsbottom.
Stubbs, Joseph, Manchester.
Sykes, John, & Sons, Ltd., Hudders-
field.
Tatham, William, & Co., Rochdale.
Taylor, Lang & Co., Ltd., Stalybridge.
Taylor, Thomas, Leicester.
Taylor, Wordsworth & Co., Leeds.
Thomson, Son & Co., Dundee.
Tomlinson, G. W., Huddersfield.
Tomlinson, James (Rochdale), Ltd.,
Rochdale.
Urquhart, Lindsay & Co., Ltd.,
Dundee.
Walker, Samuel, Manchester.
White, Thomas, & Sons, Paisley.
White, W. B., Colne.
Whiteley, William, & Sons, Ltd.,
Huddersfield.
Wren, Henry, & Co., Manchester.

Thread Machinery—

Ayrton, William, & Co., Manchester.
Brooks & Doxey, Ltd., Manchester.
Holt, Thomas, Ltd., Rochdale.
M'Gee, Walter, & Son, Paisley.
White, Thomas, & Sons, Paisley.
Wren, Henry, & Co., Manchester.

Time-Checking Machines—

Bailey, W. H., & Co., Ltd., Manchester.
 Keighley Electrical Engineering Co., Ltd., Keighley.

Tinplate Working Machinery—

(See Machine Tools.)

Tip-Waggon—

Henderson, John M., Aberdeen.
 Johnson, William, & Sons, Leeds.
 Kerr, Stuart & Co., Stoke-on-Trent.

Tobacco Machinery—

Coates, Victor, & Co., Ltd., Belfast.
 Cole, T. & W., London.
 Davis & Primrose, Leith.
 Eclipse Machine Co., Ltd., Oldham.
 Greig, John, & Sons, Edinburgh.
 Houston & Hamilton, Belfast.
 Luke & Spencer, Ltd., Manchester.
 Marsden, John, & Son, Liverpool.
 Middleton, Robert, Leeds.

Tools—Hand and Small—

Feather, George R., Bolton.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Herbert, E. G., Manchester.
 Smith, Daniel, & Co., Wolverhampton.
 Whiteley's Acme Cycle Co., Ltd., Leeds.

Tools—Machine—

(See Machine Tools.)

Tools—Steel—

Allen, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.

Tools—Steel—continued.

Cammell, Charles, & Co., Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.
 Owen, Brazil & Holborow, Sheffield.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Turton, George, Platts & Co., Sheffield.
 Winder Brothers, Ltd., Sheffield.
 Woodhouse & Rixson, Sheffield.

Torpedo Boats—as a Specialty—

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Hanna, Donald & Wilson, Paisley.
 Laird Brothers, Birkenhead.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Thornycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Yarrow & Co., Ltd., London.

Torpedo-Boat Destroyers—as a Specialty—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Doxford, W., & Sons, Ltd., Sunderland.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Laird Brothers, Birkenhead.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Thornycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Yarrow & Co., Ltd., London.

Torpedos and Torpedo Gear—

Cammell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenwood & Batley, Ltd., Leeds.

Traction Engines—

Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
M'Laren, J. & H., Leeds.
Mann & Charlesworth, Leeds.
Marshall, Sons & Co., Ltd., Gains-
borough.

Tramway Engines and Plant—

Beyer, Peacock & Co., Ltd., Man-
chester.
Brown Brothers & Co., Ltd., Edin-
burgh.
Greenwood & Batley, Ltd., Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.
Wilkinson, Wm., & Co., Ltd., Wigan.

Transformers—Electric—

(See Electric Transformers.)

Traps—Steam—

Bailey, W. H., & Co., Ltd., Man-
chester.
Carter, James, & Sons, Stalybridge.
Cole, T. & W., London.
Crowley, John, & Co., Ltd., Sheffield.
Eastwood, Walter, Ashton-under-
Lyne.
Edmeston, Archd., & Sons, Manchester.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fletcher Brothers, Ashton-under-
Lyne.
Haigh, W. B., & Co., Oldham.
Holden & Brooke, Ltd., Manchester.
Lambeth Brass and Iron Co., Ltd.,
London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Moorhouse, Sydney, & Co., Staly-
bridge.
Moorhouse, Walter, & Co., Staly-
bridge.
Oldham, Alexander, & Sons, Dukin-
field.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd.,
Hartlepool.

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Traps—Steam—continued.

Ritchie, Hart & Co., Ltd., Belfast.
Saxon, George, Manchester.
Schofield & Taylor, Huddersfield.
Sharples, William, & Co., Rams-
bottom.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Thornycroft, John I., & Co., London.
Turnbull, Alexander, & Co., Glasgow.
Urmson & Thompson, Oldham.
West End Engine Works Co., Edin-
burgh.
Whitley Partners, Leeds.

Travelling Cranes—

(See Cranes.)

Trawlers—Steam—as a Specialty—

Caledon Shipbuilding and Engineering
Co., Ltd., Dundee.
Earle's Shipbuilding and Engineering
Co., Ltd., Hull.
Hall, A., & Co., Aberdeen.
Hall, Russell & Co., Ltd., Aberdeen.
Hanna, Donald & Wilson, Paisley.
Hawthorns & Co., Ltd., Leith.
Jones, John, & Sons, Liverpool.
Lobnitz & Co., Ltd., Renfrew.
Mackie & Thomson, Glasgow.
North-Eastern Marine Engineering
Co., Ltd., Sunderland.
Rennoldson, J. P., & Sons, South
Shields.
Scott, John, & Co., Kinghorn.

Trucks, Trolleys, Barrows, etc.

Coubro & Scrutton, London.

Tube Expanders—

Cole, T. & W., London.

Tube and Rod Drawing Plant—

Berry, Henry, & Co., Leeds.
 Crossley, George, Ltd., Cleckheaton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Smith, Daniel, & Co., Wolverhampton.

Tubes—Brass and Copper—

Elmore's Copper Depositing Co., Ltd.,
 Leeds.
 Frost & Sons, London.
 Manganese Bronze and Brass Co.,
 Ltd., London.
 Phosphor Bronze Co., Ltd., London.

Tubes—Iron and Steel—

Brown, John, & Co., Ltd., Sheffield.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd.,
 London.

Tug Boats—Steam—

Barelay, Curle & Co., Ltd., Glasgow.
 Cran, John, & Co., Leith.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Eltringham, J. T., & Co., South
 Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 Lobnitz & Co., Ltd., Renfrew.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Ramage & Ferguson, Ltd., Leith.
 Rennoldson, J. P., & Sons, South
 Shields.
 Robertson, A. W., & Co., London.
 Scott & Co., Greenock.
 Stewart, John, & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Thornycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., Lon-
 don.
 Vickers, Sons & Maxim, Ltd., Bar-
 row-in-Furness.
 Yarrow & Co., Ltd., London.

Turbines—

Carrick & Ritchie, Edinburgh.
 Cran, John, & Co., Leith.
 Fraser & Chalmers, Ltd., London.
 Greenwood & Batley, Ltd., Leeds.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Moreland, Richard, & Son, Ltd., Lon-
 don.
 Parsons, C. A., & Co., Newcastle-on-
 Tyne.
 Sharples, William, & Co., Rams-
 bottom.
 Thomson, Son & Co., Dundee.

Turntables—

Brightside Foundry Co., Ltd., Shef-
 field.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Hanna, Donald & Wilson, Paisley.
 Johnson, William, & Sons, Leeds.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Larmuth, Thomas, & Co., Man-
 chester.
 Mechan & Sons, Glasgow.
 St. George's Ironworks, Ltd., Man-
 chester.
 Taylor & Hubbard, Leicester.

Turret Clocks—

Bailey, W. H., & Co., Ltd., Man-
 chester.

Twine Machinery—

(See Rope, Twine and Braid
 Machinery.)

Twist Drill Grinders—

Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Lang, John, & Sons, Johnstone.
 Luke & Spencer, Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.

Twist Drills—

Holroyd, John, & Co., Ltd., Rochdale.
Muir, Wm., & Co., Ltd., Manchester.
Smith & Coventry, Ltd., Manchester.

Tyres—Cycle—

(See Cycles and Cycle Parts.)

Tyres—Railway—

(See also Railway Plant.)

Bolton Iron and Steel Co., Ltd., Bolton.
Brown, John, & Co., Ltd., Sheffield.
Cammell, Charles, & Co., Ltd., Sheffield.
Firth, Thomas, & Sons, Ltd., Sheffield.
Fox, Samuel, & Co., Sheffield.
Vickers, Sons & Maxim, Ltd., Sheffield.

Umbrella Frames—

Fox, Samuel, & Co., Sheffield.

Vacuum Pumps and Apparatus

Allen, Harrison & Co., Manchester.
Blake, Barclay & Co., Greenock.
Browett, Lindley & Co., Ltd., Patricroft.
Calvert & Co., Huddersfield.
Carrick & Wardale, Gateshead-on-Tyne.
Fawcett, Preston & Co., Ltd., Liverpool.
Foster, Joseph, & Sons, Preston.
M'Neil, John, & Co., Glasgow.
Manlove, Alliot & Co., Ltd., Nottingham.
Pulsometer Engineering Co., Ltd., London.
Strang, Joseph, Ltd., Ramsbottom.

Valves and Cocks—Steam, Water, Gas—

(See also Reducing Valves, Relief Valves, Safety Valves, Stop Valves.)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adams, Thomas, Manchester.
Adamson, Daniel, & Co., Dukinfield.
Alley & Maclellan, Glasgow.
Arrol, Sir William, & Co., Ltd., Glasgow.
Bailey, W. H., & Co., Ltd., Manchester.
Baldwin, James, Keighley.
Berry, John, Halifax.
Beck & Co., Ltd., London.
Beeley, Thomas, Hyde.
Berry, Henry, & Co., Leeds.
Billington & Newton, Longport.
Calvert & Co., Huddersfield.
Carter, James, & Sons, Stalybridge.
Clark, J. & T., Bradford.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Dewrance & Co., London.
Donkin, Bryan, & Co., Ltd., London.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Easton, Anderson & Goolden, Ltd., Erith.
Eastwood, Walter, Ashton-under-Lyne.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fielding & Platt, Ltd., Gloucester.
Fletcher Brothers, Ashton-under-Lyne.
Frost & Sons, London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Galloways, Ltd., Manchester.
Goodwin, Arnold, & Son, London.
Hall, John, & Son, Oldham.
Hanna, Donald & Wilson, Paisley.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
Hunter & English, London.
Jackson & Brother, Bolton.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
Madan, Charles S., & Co., Manchester.
Manganese Bronze and Brass Co., Ltd., London.
Marchant, G. M., Huddersfield.

Valves and Cocks—Steam, Water, Gas—continued.

Marsden, John, & Son, Liverpool.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Musgrave Brothers, Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Remington, T. W., & Co., London.
 Ross, R. G., & Son, Glasgow.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Turnbull, Alexander, & Co., Glasgow.
 Urnson & Thompson, Oldham.
 Wailes, George, & Co., London.
 Waller, George, & Co., Stroud.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 West's Gas Improvement Co., Ltd., Manchester.
 Whitley Partners, Leeds.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Ventilating Apparatus—

(See **Heating and Ventilating Apparatus, Fans, and Mine Ventilation Plant.**)

Browett, Lindley & Co., Ltd., Patri-croft.
 Bumsted & Chandler, Hednesford.
 Donkin, Bryan, & Co., Ltd., London.
 Dougill, Alf., & Co., Ltd., Leeds.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Haswell, J. Stenson, & Co., Leicester.
 Marsden, John, & Son, Liverpool.

Ventilating Apparatus—continued.

Mechan & Sons, Glasgow.
 Pease, Rhodes & Co., Ltd., Bradford.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Turton, George, Platts & Co., Sheffield.
 Utley, Thomas, & Co., Liverpool.
 Walker Brothers, Wigan.

Vice Makers—

Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.

Vulcanizing Plant—

Galloways, Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Robinson, Joseph, & Co., Manchester.

Wadding Machinery—

(See **Cotton Waste and Wadding Machinery; also Woollen, Worsted and Waste Machinery.**)

Waggons—Railway—

(See **Railway Plant.**)

Waggons—Tip—

(See **Tip-Waggons.**)

Warping Machinery—

(See **Beaming and Warping Machinery; also Textile Machinery.**)

Washers—

(See **Bolts, Nuts, Rivets, Screws and Washers.**)

Washing Machinery—

Coal—

Fraser & Chalmers, Ltd., London.
Hodgson, H. E., & Co., Cleckheaton.

Laundry—

Ashwell & Nesbit, Ltd., London and Leicester.
Benham & Sons, Ltd., London.
Manlove, Alliott & Co., Ltd., Nottingham.

Ore—

Fraser & Chalmers, Ltd., London.

Textile—

Downham, John, & Co., Bury.
Edmeston, Archd., & Sons, Manchester.
Farmer, Sir James, & Sons, Ltd., Manchester.
Fraser, Douglas, & Sons, Arbroath.
Jackson & Brother, Bolton.
Jardine, John, Nottingham.
Kenworthy, Royston & Co., Huddersfield.
McNaught, John & William, Rochdale.
Pegg, Samuel, & Son, Leicester.
Petrie, John, Jun., Ltd., Rochdale.
Riley, J. F., Huddersfield.
Robinson, Joseph, & Co., Manchester.
Stead Brothers, Halifax.
Taylor, Wordsworth & Co., Leeds.
Thomson, Son & Co., Dundee.
Walker, Samuel, Manchester.

Water Closets—Ships'—

(See Ships' Water Closets.)

Water Meters—

Beck & Co., Ltd., London.
Goodwin, Arnold, & Son, London.

Water Pipes—

(See Pipes.)

Water Purification and Softening Apparatus—

Gimson & Co. (Leicester), Ltd., Leicester.
Pope, W., & Son, Ltd., London.
Thwaites Brothers, Ltd., Bradford.

Water-Tube Boilers—

(See Boilers—Steam.)

Water Wheels—

Abernethy, James, & Co., Aberdeen.
Bailey, W. H., & Co., Ltd., Manchester.
Barry, Henry, & Co., Ltd., Aberdeen.
Carrick & Ritchie, Edinburgh.
Clark, J. & T., Bradford.
Coates, Victor, & Co., Ltd., Belfast.
Daglish, Robert, & Co., St. Helens.
Davis & Primrose, Leith.
Death & Harris, Leicester.
Dryden, Thomas, Preston.
Fawcett, Preston & Co., Ltd., Liverpool.
Fraser & Chalmers, Ltd., London.
Gimson & Co. (Leicester), Ltd., Leicester.
Hanna, Donald & Wilson, Paisley.
Hind & Lund, Ltd., Preston.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson & Brother, Bolton.
Kerr, Stuart & Co., Stoke-on-Trent.
Lees, Anderson & Co., Glasgow.
M'Neil, John, & Co., Glasgow.
Mather, Alex., & Sons, Edinburgh.
Mechan & Sons, Glasgow.
Milne, James, & Son, Ltd., Edinburgh.
Saxon, George, Manchester.
Sharples, William, & Co., Ramsbottom.
Thomson, Son & Co., Dundee.
Waygood, R., & Co., Ltd., London.
Whitaker, C., & Co., Bradford.
Wren, Henry, & Co., Manchester.

Weaving Machinery—

(See Looms; also Textile Machinery.)

Weighing Machinery—

Denison, Samuel, & Son, Leeds.
Spencer, James, & Co., Manchester.
Walker, Eaton & Co., Sheffield.

Well-Sinking and Boring Machinery—

Carrick & Wardale, Gateshead-on-Tyne.
 Evans, Joseph, & Sons, Wolverhampton.
 Matthews, William, & Co., Manchester.
 Saxon, George, Manchester.
 Walmsley, Charles, & Co., Ltd., Bury.

Wheel and Axle Makers—

(See Axles; also Railway Plant.)

Wheel-Cutting Machinery—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Butler, J., & Co., Halifax.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Kendal & Gent, Manchester.
 Lang, John, & Son, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Scott & Hodgson, Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Stirk, John, & Sons, Halifax.
 Wilkinson, G., & Sons, Keighley.

Wheel Cutting ("To the Trade")—

Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bailey & Garnett, Ltd., Stalybridge.
 Barlow, H. B., & Co., Manchester.
 Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.

Wheel Cutting—"To the Trade"—*cont.*

Gibson, J., & Co., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Hutchinson, Hollingworth & Co., Ltd., Dobcross.
 Jackson, P. R., & Co., Ltd., Manchester.
 Lang, John, & Sons, Johnstone.
 Mayes, John, London.
 Parkinson, J., Shipley.
 Scott & Hodgson, Manchester.
 Smith & Coventry, Ltd., Manchester.
 Whittaker, William, & Sons, Oldham.

Wheel-Moulding Machines—

Buckley & Taylor, Oldham.
 Craven Brothers, Ltd., Manchester.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Whittaker, William, & Sons, Oldham.

Wheels — Geared, Machine Moulded, Fly, etc —

(See Mill Gearing, Shafting and Shaft Fittings.)

Whistles—Steam—

(See Sirens and Whistles.)

Winches—Steam—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crook, Thomas T., Bolton.
 Good & Menzies, Hull.
 Roger, R., & Co., Stockton-on-Tees.
 Stewart, John, & Son, Ltd., London.

Winding Engines and Machinery

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Barraclough, Joseph, & Sons, Barnsley.
 Booth, Joseph, & Brothers, Leeds.
 Bradley, R., & Co., Wakefield.

Winding Engines and Machinery
—continued.

Carmichael, James, & Co., Ltd.,
Dundee.
Carrick & Wardale, Gateshead-on-
Tyne.
Chaplin, Alex., & Co., Glasgow.
Clarke, Chapman & Co., Ltd., Gates-
head-on-Tyne.
Clayton, Goodfellow & Co., Ltd.,
Blackburn.
Coates, Victor, & Co., Ltd., Belfast.
Crook, Thomas T., Bolton.
Crow, Harvey & Co., Glasgow.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Death & Harris, Leicester.
Douglas Forge Co., Ltd., Wigan.
Entwisle & Gass, Ltd., Bolton.
Fawcett, Preston & Co., Ltd., Liver-
pool.
Fielding & Platt, Ltd., Gloucester.
Fleming & Ferguson, Ltd., Paisley.
Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd.,
Paisley.
Galloways, Ltd., Manchester.
Hanna, Donald & Wilson, Paisley.
Heald, John, Chorley.
Henderson, John M., Aberdeen.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson & Brother, Bolton.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.
Kenworthy, Taylor & Co., Barnsley.
Leeds Engineering and Hydraulic
Co., Leeds.
M'Kie & Baxter, Glasgow.
Manlove, Alliott & Co., Ltd., Notting-
ham.
Marshall, Sons & Co., Ltd., Gains-
borough.
Musgrave, John, & Son, Ltd., Bolton.
Nasmyth, Wilson & Co., Ltd., Man-
chester.
Needham Brothers & Brown, Barnsley.
Pullan & Mann, Leeds.
St. George's Ironworks, Ltd., Man-
chester.
Simpson, James, & Co., Ltd., Lon-
don.
Saxon, George, Manchester.
Scott & Hodgson, Manchester.
Shanks, Alex., & Son, Ltd., Arbroath.
Sharples, William, & Co., Rams-
bottom.

Winding Engines and Machinery—
—continued.

Stevenson & Co., Ltd., Preston.
Walker Brothers, Wigan.
Walker, Eaton & Co., Sheffield.
Walmsley, Charles, & Co., Ltd., Bury.
Wilkinson, Wm., & Co., Ltd., Wigan.
Wood & Gee, Wigan.
Wood, John & Edward, Bolton.
Worsley Mesnes Iron Works Co.,
Wigan.
Wren, Henry, & Co., Manchester.
Yates & Thom, Blackburn.

Winding Machinery—

(See Textile Machinery.)

Windlasses—Steam and Hand—

Clarke, Chapman & Co., Ltd., Gates-
head-on-Tyne.
Dryden, Thomas, Preston.
Earle's Shipbuilding and Engineering
Co., Ltd., Hull.
Emerson, Walker & Thompson
Brothers, Ltd., Gateshead-on-
Tyne.
Fisher & Co., Paisley.
Hanna, Donald & Wilson, Paisley.
Harfield & Co., Ltd., Blaydon-on-
Tyne.
Henderson, John M., Aberdeen.
Napier Brothers, Ltd., Glasgow.
Reid, Thomas, & Sons, Paisley.

Wire and Wire Rope—

Cammell, Charles, & Co., Ltd.,
Sheffield.
Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
Fox, Samuel, & Co., Sheffield.
Phosphor Bronze Co., Ltd., London.

Wire Drawing Plant—

Crossley, George, Ltd., Cleckheaton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Hamer, S. H., Halifax.
 Harding, Richardson, Rhodes & Co.,
 Ltd., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Wren, Henry, & Co., Manchester.

Wire-Working Machinery—

Birch, G., & Co., Manchester.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Glover, M., & Co., Leeds.
 Hamer, S. H., Halifax.
 Hattersley, George, & Sons, Ltd.,
 Keighley.
 Hodgson, H. E., & Co., Cleckheaton.
 Kitson, J., & Sons, Ltd., Bradford.

Wood-Working Machinery—

Birch, P., & Co., Manchester.
 Clarke, T. A. W., Leicester.
 Cole, T. & W., London.
 Dickinson, John, & Co., Keighley.
 Entwisle & Gass, Ltd., Bolton.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Luke & Spencer, Ltd., Manchester.
 M'Dowall, John, & Sons, Johnstone.
 Sagar, J., & Co., Halifax.
 White, Thomas, & Sons, Paisley.

Woollen, Worsted and Waste Machinery—

Atherton Brothers, Ltd., Preston.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Cliffe & Co., Huddersfield.
 Crossley, John, & Co., Halifax.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Hacking & Co., Bury.
 Haigh, John, & Sons, Ltd., Hudders-
 field.

Woollen, Worsted and Waste Machinery—continued.

Hall & Stells, Keighley.
 Harding, Richardson, Rhodes & Co.,
 Ltd., Leeds.
 Hattersley, George, & Sons, Ltd.,
 Keighley.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Hoyle & Preston, Keighley.
 Hutchinson, Hollingworth & Co.,
 Ltd., Huddersfield.
 Jefferson, Joseph, & Brothers, Brad-
 ford.
 Kenworthy, Royston & Co., Hudders-
 field.
 Kilburn, R., & Sons, Leeds.
 Leach & Co., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.
 McNaught, John & William, Rochdale.
 Petrie, John, Jun., Ltd., Rochdale.
 Platt Brothers & Co., Ltd., Oldham.
 Ramsden Brothers, Keighley.
 Ratcliffe, J., & Sons, Leeds.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd.,
 Manchester.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Hudders-
 field.
 Tatham, William, & Co., Rochdale.
 Taylor, Lang & Co., Ltd., Staly-
 bridge.
 Taylor, Wordsworth & Co., Leeds.
 Whiteley, William, & Sons, Ltd.,
 Huddersfield.
 White, W. B., Colne.

Yacht Builders—

(See Shipbuilders; also Launches and Yachts.)

Yarn-Preparing Machinery—

(See Woollen, Worsted and Waste Machinery; also Textile Machinery.)

Zinc-Working Machinery—

(See Machine Tools.)



The Engineering Employers' Federation.

SUPPLEMENTARY LIST OF MEMBERS, No. 1

N.B.—This List contains the Names of the new Members admitted during 1899 and January—July, 1900.

It should be consulted along with original List of Federated E. & S. Employers issued in December, 1898.

(ARRANGED IN ALPHABETICAL ORDER.)

THE ENGINEERING EMPLOYERS' FEDERATION,
105 WEST GEORGE STREET, GLASGOW.

August, 1900.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Airdrie Iron Co,	Engineers, Ironfounders, Boiler-makers	Airdrie Iron Works	Airdrie	Iron, Airdrie	6 Airdrie
Akroyd, William	Ironfounder	New Bank	Halifax	...	57
Alder & Mackay	Brassfounders	Gorgie Road	Edinburgh	Alder, Edinburgh	81 Western
Allen, James	Hosiery Accessories Maker	Parkinson Street...	Nottingham	...	81
Anderson & Co.	Ironfounders	...	Musselburgh	Foundry, Musselburgh	28A
Anderton, Alfred, & Sons	Boilermakers	Antley Boiler Works	Accrington	Boiler, Church	136
Archdale, James, & Co.	Machine Toolmakers	Ledsam Street	Birmingham	Archdale, Birmingham	3558
Baldwin, Samuel	Engineer, Hoistmaker, Millwright, etc.	Bethesda Street Iron Works	Burnley	S. Baldwin, Engineer, Burnley	154 National
Balmforth Bros., Ltd.	Engineers and Cranemakers, etc.,	Peel Ings Foundry	Rodley, near Leeds	Balmforth, Rodley	36 Stan-ningley,
Beath & Keay	Ironfounders and Millwrights	Albion Foundry	Dundee	...	412
Beddie, John, & Sons	Brassfounders	Waverley Brassworks, 56 Fountainbridge	Edinburgh	...	...
Bell, Charles	Engineer	Bath Street, Leeds Road	Bradford	Ironer, Bradford	244
Belliss & Morcom, Ltd. (Late G. E. BELLISS & Co., Ltd.)	Engineers	Ledsam Street Works	Birmingham	Belliss, Birmingham	3518
Billings, M., & Son	Ironfounders	Causeway Lane	Leicester	Billings, Leicester	589
Blair & Wheeler	Machine Toolmakers	Tyne Tool Works	Wallsend-on-Tyne	...	36 National

Britannia Co., The ...	Engineers, Toolmakers, and Ironfounders	Britannia Works	Colchester ...	Britannia, Colchester	47 National
Broadfoot, John, & Sons	Engineers and Brassfounders	Inchholm Works, Whiteinch	Glasgow ...	Broadfoot ...	103 Hillhead
Bromilow, John ...	Brass and Aluminium Founder and Finisher	William Street Brass and Aluminium Works	Heywood ...	Brass, Heywood	1129
Brookfield Foundry Co., The	Engineers and Ironfounders	St. Mary's Street	St. Helens ...	... ..	52
Brook, Henry, & Co., Ltd.	Ironfounders	Colne Road	Huddersfield	... ..	247
Brown, David, & Sons	Patternmakers and Gear Cutters	East Parade	Huddersfield	Gearing, Huddersfield	80
Buchanan, James, & Co.	Brassfounders	Victoria Brass Foundry, 236 Leith Walk	Edinburgh	... ..	...
Buchanan, James, & Son	Engineers and Ironfounders	Caledonia Foundry, 105 Brasenose Road	Liverpool ...	Buchanan, Liverpool	132 Bootle
Bull's Metal and Melloid Co., Ltd.	Bronze and Brass Manufacturers	6 Jeffrey's Square, St. Mary Axe	London, E.C.	Melloid, London	4378
Burrell, Chas., & Sons, Ltd.	Traction Engine Manufacturers	... ..	Thetford, Norfolk	Burrell, Thetford	...
Catton & Co., Ltd.	Steel Castings Manufacturers	Hunslet	Leeds	Cattons, Leeds	561
Chadwick Machine Co., Ltd., The	Machine Makers	High Street Mills	Cleckheaton, Yorks.	Chadwick, Cleckheaton	83
Chatwin, Thomas	Engineers' Tool Manufacturer	Victoria Works, Great Tindal Street	Birmingham	Chatwin, Birmingham	...
Chester, Edward, & Co., Ltd.	Engineers and Boilermakers	... ..	Renfrew	... ..	...
Clayton Engineering and Electrical Construction Co., Ltd., The	Electrical and General Engineers	Newton, Hyde	Nr. Manchester	Dynamo, Hyde	62 Hyde
Clayton & Shuttleworth	General Engineers and Threshing Machine Manufacturers	Stamp End Works	Lincoln	Claytons, Lincoln	43 National

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Clifton & Waddell ...	Machine Toolmakers ...	... ..	Johnstone ...	... ..	...
Cooper & Greig ...	Engineers and Boilermakers ...	Britannia Works, East Dock Street	Dundee ...	Condenser, Dundee	566
Cowan, W. & B., Ltd. ...	Gas Meter Manufacturers ...	Buccleuch Street Works	Edinburgh ...	Disc, Edinburgh	753
Crabtree & Co.... ...	Marine Engineers, Iron and Brass Founders	Southtown Ironworks ...	Great Yarmouth	Crabtree, Yarmouth	46
Craven, Edward, & Co. ...	Steel Founders ...	30 Dewsbury Road ...	Leeds ...	... ..	1703
Croft & Perkins... ...	Engineers, Millwrights, and Iron Founders	Great Northern Works, Leeds Road	Bradford ...	Pulleys, Bradford	349
Crossley Bros., Ltd. ...	Manufacturers of Gas Engines, Pumps, etc.	Openshaw ...	Manchester ...	Crossleys, Openshaw	419
Cunliffe & Croom, Ltd. ...	Machine Toolmakers and Iron-founders	Broughton Ironworks ...	Manchester ..	Lathe, Manchester...	1886
Davey, Paxman, & Co., Ltd. ...	Engineers and Boilermakers ...	Standard Iron Works ...	Colchester ...	Paxman, Colchester	52
Deighton Patent Flue and Tube Co., Ltd., The ...	Manufacturers of Corrugated Steel Furnaces for Marine and Land Boilers	Pepper Road ...	Leeds ...	Flues, Leeds	1674
Dewhurst, Andrew ...	Boilermaker ...	Victoria Boiler Works, Bridge Street	Blackburn ...	Dewhurst, Boiler, Church,	
Dove, James, & Co. ...	General Engineers ...	18 Greenside Lane, Leith Walk	Edinburgh		
Drake & Gorham ...	Electrical, Mechanical, and Hydraulic Engineers	66 Victoria Street, Westminster,	London, S.W.	Accumulator, London	71 Westminster
Drake, Jonas, & Son ...	Engineers and Ironfounders (Gas)...	Ovenden ...	Halifax ...	Drakeson ...	43
Dunn, Alex., & Son ...	Ironfounders ...	Piercy Street Foundry.	Manchester		1502

Electric Construction Co., Ltd., The	Electrical Engineers ...	...	...	Wolver-hampton	Electric, Wolver-hampton	75
Electromotors, Limited	Manufacturers of Electric Motors, etc.	...	...	Manchester ...	Magnet, Manchester	4442
Empsall, W. H.	Brassfounder and Finisher ...	...	25 Nelson Street...	Bradford	...	1437
Ewen & Mitton,	General Engineers ...	...	Smithfield Works, ...	Birmingham	Method, Birmingham	1402
Ewing & Lawson	Boilermakers and Engineers	...	Crownpoint Boiler Works, Crownpoint Road, and St. Marnock Street, Mile-End	Glasgow	Diameter, Glasgow	2597
Fairfield Shipbuilding and Engineering Co., Ltd., The	Engineers and Shipbuilders	...	...	Govan, near Glasgow	Fairfield	557 Royal Govan
Falcon Iron Works. Ltd., The (formerly John Wild & Co., Ltd.)	Colliery Engineers	...	Falcon Iron Works	Oldham	Falcon, Oldham	352
Farrar, James	Wood Turner and Patternmaker	...	Emmitt's Court, Gaol Lane	Halifax	...	...
Feather, William, & Co.	Toolmakers	...	Hope Street	Halifax	...	...
Ferguson & Co.	Ironfounders	...	Short Street	Leicester	...	746
Fieldhouse, Crossfield & Co., Ltd.	Printers' Engineers	...	Wharfedale Foundry	Otley	Reliance, Otley	...
Foden, Edwin, Sons, & Co., Ltd.	General Engineers	...	Elworth Works, Sandbach	Manchester	Foden, Sandbach	...
Forrest & Son, Ltd.	Engineers and Shipbuilders	...	Shipyard ...	Wyvenhoe, Essex; London, E.C.	Forrest, Wyvenhoe, Forrestiere, London	5942 Avenue

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Foster Brothers & Co.	Ironfounders	Hope Foundry	Preston	Hope Foundry, Preston	82
Foster, Sidney & Co.	(See Sidney, Foster & Co.)				
Foster, Wm., & Co., Ltd.	Agricultural and General Engineers	Wellington Foundry, Fifth Road	Lincoln	Foster, Lincoln	18
Furnevall & Co., Ltd.	General Engineers and Ironfounders	Union Foundry	Haslingden	Furnevall, Haslingden	1
Furse, W. J.,	Electrical Engineer	17 Burton Street	Nottingham	Furse, Nottingham	539
Gaukrodger, Sykes & Roberts, Ltd.	Valvemakers, Brassfounders, etc. ...	Spring Hall Lane	Halifax	Brass, Halifax	204
Gibb & Hogg, Ltd.	Engineers and Ironfounders	Victoria Engine Works...	Airdrie	Hogg, Airdrie	12
Grange Iron Co., Ltd., The	General Engineers	Grange Iron Works	Durham	Grange, Durham	5 P.O. Durham
Grangemouth and Greenock Dockyard Co., The	Shipbuilders and Ship-repairers	... ..	Grangemouth	Dockyard, Grangemouth	11
Grocers' Engineering Co., The	Manufacturers of Tea, Coffee, Cocoa, etc., Machinery	Cole Street, Swan Street	London S.E.	Metrical, London	760 Hop.
Hart, David, & Co.	Engineers and Ironfounders	Wenlock Road, City Rd.	London, N. ...	Bascule, London	733 King's Cross
Hastie, John, & Co., Ltd. ...	Engineers	Kilblain Engine Works, Princes Street	Greenock	Hastie, Greenock	133
Hattersley, R. E., & Co. ...	Tool Manufacturers	Spring Hall Lane	Halifax	Brass, Halifax	204

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Lord, J. K. & R.	Boilermakers	Barnbrook Boiler Works	Bury ...	... ..	...
Lord, William	Boilermaker	Lord Street Boiler Works	Bury ...	... ..	0249
Lowca Engineering Co., Ltd., The	Engineers, Ironfounders, and Boiler- makers	Lowca Engine Works ...	Whitehaven	Lowca, Parton, Cumberland	88
Lund, Samuel, & Sons, ...	Ironfounders	Midland Foundry	Keighley	Lunds, Ironfounders, Keighley	142
Mackenzie Brothers ...	Ironfounders	Slateford Road ...	Edinburgh	Iron, Edinburgh	67 Western
M'Kenzie, J., & Co., ...	Ship and Boatbuilders and Re- pairers	44 Sandport Street	Leith	... ..	...
M'Keown, J. & J. ...	Ironfounders and Smiths	Grosvenor Street Smith Works	Belfast	... ..	923
M'Millan, Archibald, & Co. ...	Coppersmiths and Brassfounders ...	Shrub Place, Leith Walk	Edinburgh	Vacuum, Edinburgh	4043
MacTaggart, Scott & Co. ...	Hydraulic and General Engineers ...	Station Iron Works, Loanhead	Near Edin- burgh	Valve, Loanhead	12 Loanhead
Mallinson, J. & J. ...	Engineers' Toolmakers	Lucy Street, New Bank	Halifax	... ..	...
Mallinson Brothers ... (JOHN MALLINSON)	Machine Toolmakers	Hipperholme	Near Halifax	... ..	...
Marshall & Co. ...	General Engineers and Motor Car Builders	Belsize Works, Clayton Lane, Clayton	Manchester ...	Belsize, Manchester	1849
Martin, G. & W. ...	Engineers, Boilermakers, and Black- smiths	Oak Tree Iron Works, Regent Road	Aberdeen ...	... ..	...

Milburn, John ...	Engineer and Ironfounder ...	...	...	...	...	...	...	...	...	...	Milburn, Engineer ...	17 National
Mills, Edwin, & Son ...	Engineers ...	...	Aspley ...	...	...	Huddersfield ...	Omo, Huddersfield...	251				
Milthorp, G. & F., Ltd.	Printers' Engineers and Printing Ink Manufacturers	...	3 Vicarage Street	...	...	Wakefield ...	Milthorp, Wakefield	75				
Moffatt & Eastmead, Ltd.	Engineers ...	...	39 Victoria Street, Westminster	...	...	London, S.W.	Hoistway, London	...				
Moorwood, Sons & Co., Ltd.	Engineers, Ironfounders, and Cooking Apparatus Manufacturers	...	Harlestone Iron Works	...	...	Sheffield	Moorwoods, Sheffield	39, 228, and 2289				
Muir & Findlay ...	Boilermakers ...	...	Parkhead Boiler Works	...	...	Glasgow	Endurance, Glasgow	2634				
Mumford, Arthur G. ...	Engineer ...	...	Culver Street Works	...	...	Colchester	Mumford, Colchester	...				
Musgrave & Co., Ltd.	Ironfounders and Ironfitters	...	St. Ann's Iron Works	...	...	Belfast	Musgrave, Limited	68				
Musker, C. & A., Ltd.	Hydraulic Engineers ...	...	Dundas Street, Bootle	...	...	Liverpool	Fulgor, Liverpool ...	104 Bootle				
Neill, W., & Son ...	Engineers, Boilermakers, Iron and Brass Founders, etc.	...	Bold Iron Works,	...	...	St. Helens Junction	Neill, St. Helens ...	20 St. Helens				
Newsome, William, & Son ...	Engineers and Brass Founders	...	...	...	...	Sowerby Bridge	Newsomes, Sowerby Bridge	39				
New Steam Stamp Mill Syndicate, Ltd., The	Manufacturers of Steam Stamp and Ship Repairing Work	...	Hereford St., Ordsall Lane Reg. Office: 34 Crowther Street, Regent Road	...	...	Salford	Vortex, Manchester	2733				
Newton & Bean ...	Engineers and Ironfounders	...	Dudley Hill ...	...	...	Salford Bradford	Adroit, Dudley Hill	2				
Newton & Pycroft ...	Lace Machine Builders	...	Alfred Street Mills	...	...	Nottingham	...	771				
Nicholson, W. N., & Sons, Ltd.	Engineers ...	...	...	...	...	Newark-on-Trent	Nicholson's, Newark	...				
Nicholson Tool Co., The Jos. C.	Machine Tool Manufacturers	...	Collingwood Street	...	...	Newcastle-on-Tyne	Machinery, New-castle-on-Tyne	1532				
Northern Engineering Co., Ltd., The	Engineers ...	...	Works :—City Road	...	...	Halifax	... Neco, Halifax	270 239				

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Oldfield & Schofield ...	Engineers' Toolmakers ...	Central Iron Works ...	Halifax	... ..	121 National
Parkinson, Thomas ...	Brass and Ironfounder and Machinist	Britannia Works, Canterbury Street	Blackburn	... ..	15
Park, W., & Co. ...	General Engineers ...	... ..	Wigan	Park, Wiend, Wigan	67
Parson's Marine Steam Turbine Co., Ltd., The	Marine Engineers ...	Turbinia Works ...	Wallsend, R.S.O.	Turbinia, Wallsend	220
Partington & Co. ...	Boilermakers ...	... ..	Bradford	Partington, Bradford	198
Pattison, E., & Co. ...	Ironfounders ...	St. Peter's Lane ...	Leicester	Pattison, Leicester ...	648
Peberdy & Earp ...	Machinists ...	Farnham Street ...	Leicester	... ..	...
Penman & Co. ...	Boilermakers ...	Strathclyde Street, off Dalmarnock Road	Glasgow	Penman, Glasgow ...	2544
Peppermill Brass Foundry Co., The	Brassfounders... ..	... ..	Wigan	Pepper, Wigan ...	19
Piercy & Co. ...	Engineers and Ironfounders	Broad St. Engine Works and Oozells St. Fdy. Atlas Works, Spring Hill	Birmingham	Piercy, Birmingham	20
Piggott, Thomas, & Co., Ltd.	Engineers ...	Lionel Street ...	Birmingham	Atlas, Birmingham	86
Player, W. J. ...	Engineers ...	Atlas Works ...	Burnley	Players, Birmingham	1310
Pollard, James ...	Iron and Brassfounder and Millwright	Sandiacre ...	Near Nottingham	Pollard, Atlas Works	94
"Premier" Gas Engine Co., Ltd., The	Gas Engine Manufacturers ...	Albert Foundry, Jane St.	Leith	Premier, Sandiacre	39 Long Eaton
Primrose & Co. ...	Ironfounders ...	... ..	... ..	... ..	4189

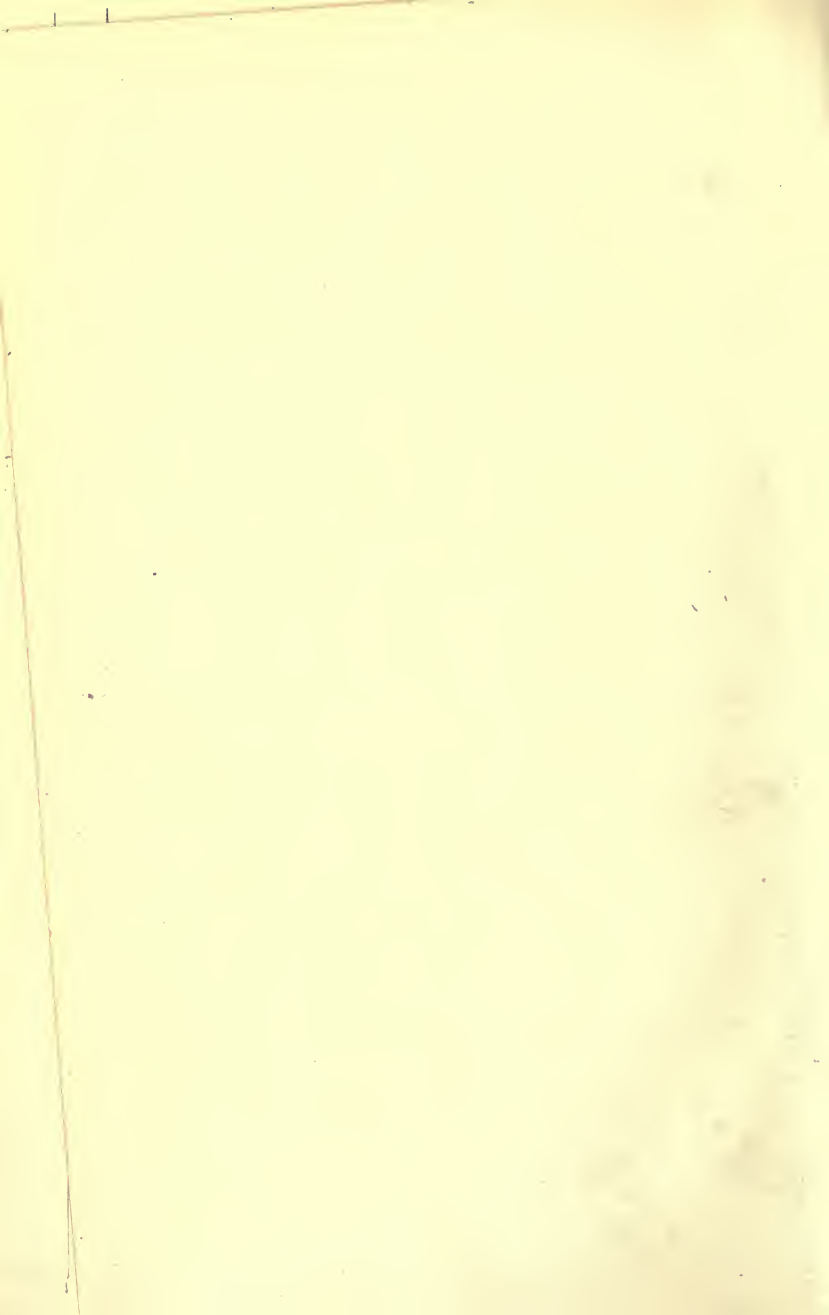
Ransomes & Rapier, Ltd. ...	Engineers and Ironfounders	...	Waterside Ironworks	... Ipswich	and Newark-on-Trent	Waterside, Ipswich Ransomes, Rapier, London ... Ransomes, Ipswich	49 Ipswich 568 West-minster 11
Ransomes, Sims, & Jefferies, Ltd.	Agricultural and General Engineers	...	Orwell Works	... Ipswich	...	...	...
Reader, E., & Sons, Ltd. ...	Engineers	... ..	Phoenix Works	... Nottingham	Nottingham	Reader, Nottingham	414
Reavell & Co., Ltd. ...	Mechanical Engineers	...	Ramlagh Works	... Ipswich	Ipswich	Reavell, Ipswich	212
Redgate, John ...	Ironfounder	... ..	Albion Foundry, 21 Parliament Street	Nottingham	Nottingham	...	621
Ridley & Co. ...	Steel Founders, Steel Manufacturers, and Forgemasters	...	Swalwell Steel Works	...	Newcastle-on-Tyne	"Cam," Newcastle	460 G. P. O.
Roberts Brothers	Machine Tool and Fuel Economiser Makers	...	...	...	Dukinfield	Roberts Brothers, Dukinfield	11 Ashton-under-Lyne 2141
Roberts, Vincent	Heating and Mechanical Engineer	...	Cherry Row, Skinner Lane	Leeds	Leeds	...	...
Roberts, Wm., & Sons, Ltd.,	Engineers, etc.	... ..	Phoenix Foundry	Nelson	Nelson	...	5
Robertson, James, & Son	Engineers, Boilermakers, Iron and Brassfounders, etc.	...	Dock Street Engineering Works	Fleetwood	Fleetwood	...	14
Robey & Co., Ltd. ...	Steam Engine, Boiler, and Thrashing Machine Manufacturers	...	Globe Works	Lincoln	Lincoln	Robey, Lincoln	3 Nat. 4 P. O. 18
Robinson, Cooks & Co. ...	Engineers	... ..	Atlas Foundry	St. Helens	St. Helens	Atlas, St. Helens	...
Rolland, M'Kirdy & Co. ...	Brassfounders	... ..	22 St. James Square	Edinburgh	Edinburgh	Brass, Edinburgh	1087
Russell & Turnbull	Ironfounders	... ..	Abbeyhill	Edinburgh	Edinburgh	...	821
Ruston, Proctor & Co., Ltd.	General Engineers	... ..	Sheaf Iron Works	Lincoln	Lincoln	Ruston, Lincoln	56
Saville, Jason	Engineer and Pump Maker	...	...	Bradford	Bradford	...	735
Sharpe & Co. ...	Ironfounders and Engineers	...	Phoenix Foundry	Lancaster	Lancaster	Phoenix, Lancaster	13

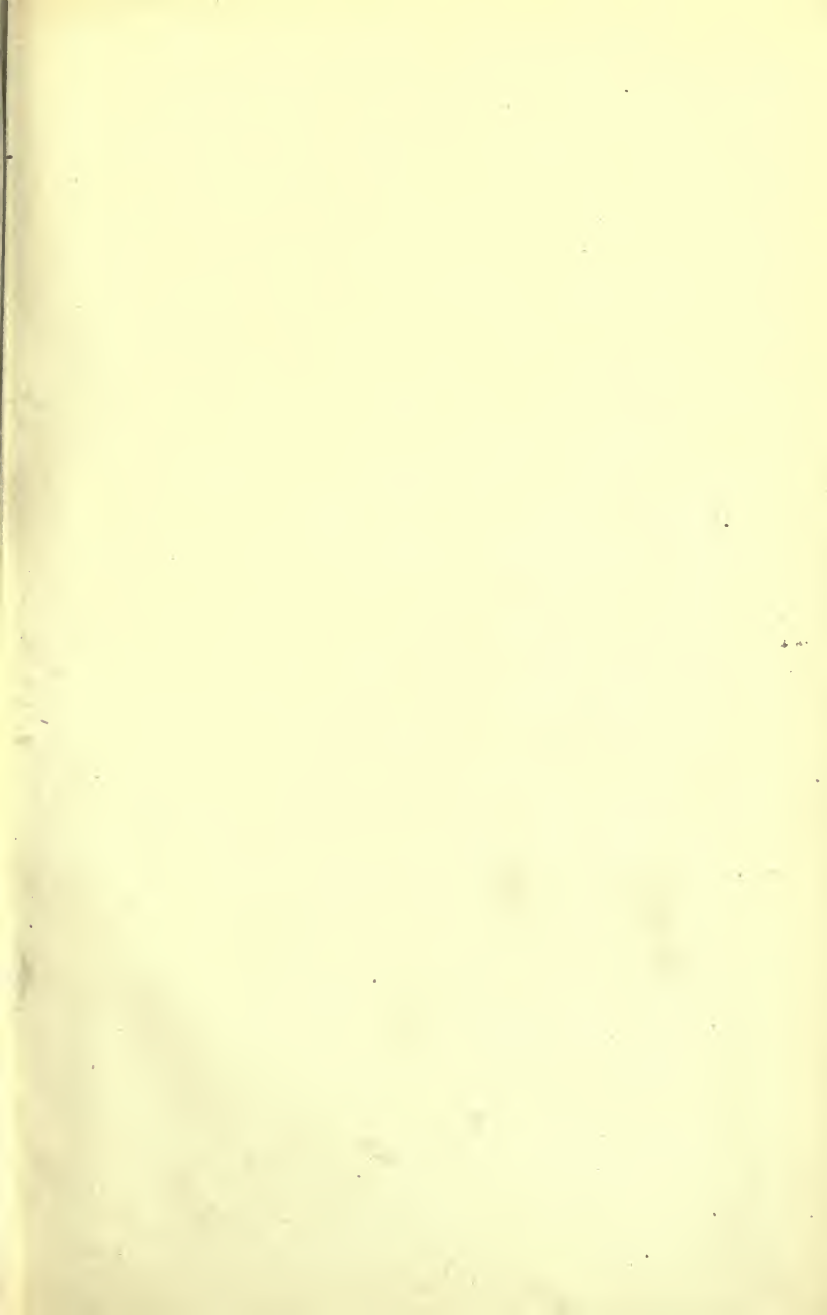
NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Shaw, W., & Co. ...	Steel Founders ...	Wellington Foundry ...	Middlesbro-on-Tees	Wellington, Middlesbro	106
Sidney, Foster & Co. ...	Patternmakers... ..	St. John's Works, Lister Lane	Halifax	... ..	...
Simpson, Strickland & Co., Ltd.	Engineers ...	... ..	Dartmouth	Engineers, Dartmouth	2
Smith Brothers & Eastwood	Engineers ...	... ..	Bradford	Engineers, Bradford	1143
Smith's Injector Co., Ltd. ...	Brassfounders ...	Station Street ...	Nottingham	Injector, Nottingham	146
Snowden, John ...	Boilermaker ...	Kingston Boiler Works, Oxford Street	Hull	... ..	508
Spurr, Inman & Co., Ltd. ...	Boilermakers ...	Caldervale Boiler Works	Wakefield	Spurinman, Wakefield	37
Stanford & Co. ...	General Engineers ...	High Street ...	Colchester	Stanford, Engineer, Colchester	...
Stewardson & Co. ...	Coppersmiths and Brassfounders	Albert St., Leith Walk ...	Edinburgh	Stewardson, Edinburgh	169
Stirling Boiler Co., Ltd. ...	Boilermakers ...	2 St. Andrew Square	Elgin	Coppersmiths, Elgin	24
Summerscales, W., & Sons, Ltd.	Laundry Engineers ...	Phoenix Foundry	Edinburgh	Evaporate ...	1256
Swift & House ...	Engineers and Ironfounders	Union Foundry, Pemberton	Keighley	Phoenix, Keighley ...	92 Keighley
Taylor, Charles ...	Machine Toolmaker ...	Bartholomew Street	Near Wigan	... ..	...
Taylor, C. H., & Son ...	Ironfounders ...	Cyclops Foundry	Birmingham	Lathes, Birmingham	401
			Leeds	... ..	1196

Tillotson, Fred. ...	...	Ironfounder	...	Otley Road	...	Shipley	...	...	...	...
Tindall, Earle & Hutchinson	...	Engineers, Boilermakers, etc.	...	Vulcan Ironworks	...	Hull ...	...	Vulcan, Hull	...	380 National
Thomson, David	...	Engineer	...	Slateford Road	...	Edinburgh	...	...	...	...
Traill, Robert, & Co. ...	...	Ironfounders	...	Vulcan Foundry, Bonnington Road	...	Edinburgh	...	...	...	582
Travers & Co. ...	...	Engineers and Ironfounders	...	Britannia Works...	...	Belfast	...	Travers, Belfast	...	573
Turner, E. R., & F., Ltd. ...	...	Manufacturing Engineers	...	82 Mark Lane	...	Ipswich, London, E.C.	...	Gippeswyk, Ipswich	...	24 Ipswich
Turner, J., & Richardson	...	Machine Tool Makers	...	Bowling Green Tool Work, Well Lane	...	Halifax	...	Canvassers, London	...	
Vulcan Foundry, Ltd., The ...	...	Locomotive Builders and General Engineers	...	...	...	Newton-le-Willows, Lancashire	...	Vulcan, Newton-le-Willows	...	4
Vicars, T. & T. ...	...	Manufacturers of Biscuit Machinery, Oven and Mechanical Stokers	...	...	...	Earlestown, Newton-le-Willows, Lancashire	...	Vicars, Earlestown	...	...
Varley, John, & Co. ...	...	Ironfounders	...	Waterloo Foundry, Atlas Street	...	St. Helens	...	Varley, St. Helens	...	43
Wadsworth, William, & Sons	...	Millwrights and Machinists	...	School Hill	...	Bolton	...	...	...	171

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Ward Brothers ...	Machine Makers (Dobbies and Accessories)	Ingham St. Iron Works	Blackburn	... ..	360
Ward, H. W., & Co.	Machine Toolmakers	Lionel Street	Birmingham	Tudor, Birmingham	1469
Watt, James, & Co. ...	Engineers	Soho Foundry	Birmingham	Watt, Soho, Smethwick	2034
Webb, Joseph, & Co.	Forgemasters	Irwell Forge and Rolling Mill	Bury	Forge, Bury	72
West's Patent Power Tyre-Setter Syndicate	Hydraulic Engineers	140 Thornton Road	Bradford	Acrostical, Bradford	1634
Whitehead & Co. ...	Torpedo Manufacturers	23 College Hill, Cannon St.	London	Acrostical, London	Bradford
Whitmore & Binyon, Ltd. ...	Millwrights, Engineers, etc.	Portland Harbour	Weymouth	Whitehead, Wyke Regis,	6
Winn, Charles, & Co.	Engineers and Brassfounders	Torpedo Works	Wickham	Works, Wickham	Weymouth
Winter, Thomas, & Co., Ltd.	Engineers, Toolmakers, Brass and Ironfounders, and Copper-Smiths	Mark Lane, ...	London	Wickham Market	366 and 1437
Woodhead, William, & Co. ...	Engineers' Toolmakers	St. Thomas Works, Granville Street	Birmingham	Accelerate, London	87
Woodhouse & Co. ...	Brass and Ironfounders	Byrom Street and Canterbury Street	Blackburn	Winn, Birmingham	...
Workington Bridge and Boiler Co., Ltd.	Manufacturers of Bridge-building Plant, etc.	...	Halifax	Automatic, Blackburn	...
Wright, Edward	Engineer	...	Doncaster	...	4
Wright, J. & T.	Engineers and Ironfounders,	...	Workington	Woodhouse, Doncaster	29
Wright, Samuel	Ironfounder	15 Gordon Street	Bradford	Marley	Workington
		Platt Bridge	Near Wigan	...	1316
		Havelock Street	Leicester	...	...
				...	96

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	ADDRESS.	No.
<i>Addendum.</i> Omitted from "48 Hours" List:— Hawthorn, R. & W., Leslie & Co., Ltd.	Marine Engineers, Locomotive Builders, and Shipbuilders	Forth Banks	Newcastle-on-Tyne	Locomotive	1232 Nat. 413 P.O.





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